R E P O R T   R E S U M E S

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FIELD TEST AND EVALUATION OF SELECTED ADULT BASIC EDUCATION SYSTEMS.

GREENLEIGH ASSOCIATES INC., NEW YORK, N.Y.

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IN A LARGE-SCALE FIELD TEST WITH FUNCTIONALLY ILLITERATE ADULTS, THIS PROJECT EVALUATED FOUR READING SYSTEMS--LEARNING TO READ AND SPELL, READING IN HIGH GEAR, MOTT BASIC LANGUAGE SKILLS PROGRAM, AND SYSTEMS FOR SUCCESS. TESTING WAS CONDUCTED IN SEVEN COMMUNITIES IN NEW YORK, THREE IN NEW JERSEY, AND FIVE IN CALIFORNIA, PROVIDING A MIXTURE OF RURAL AND URBAN RESIDENTS AND DIVERSE ETHNIC GROUPS. THE PARTICIPANTS IN EACH STATE WERE WELFARE RECIPIENTS, 18 YEARS OR OVER, NOT IN SCHOOL, AND BELOW THE FIFTH-GRADE READING LEVEL. EACH CONTROL GROUP CONTAINED 125 PARTICIPANTS SIMILAR IN LITERACY LEVEL AND OTHER RESPECTS TO EXPERIMENTAL GROUPS. SMALL SIZE OF CONTROL GROUPS MADE RESULTS INCONCLUSIVE. THE VARIABLE WAS LEVEL OF TEACHER PREPARATION--TRAINED TEACHERS (PREFERABLY EXPERIENCED IN ADULT EDUCATION), COLLEGE GRADUATES, OR HIGH SCHOOL GRADUATES. CRITERIA FOR EVALUATING READING SYSTEMS WERE (1) SHORT-TERM CHANGE IN READING LEVEL, (2) ABILITY TO QUALIFY FOR OCCUPATIONAL TRAINING OR AVAILABLE JOB OPPORTUNITIES, (3) ABILITY TO MEET ADULT RESPONSIBILITIES, (4) HIGHLY TEACHABLE SYSTEMS, REQUIRING LEAST POSSIBLE SKILL, PLUS CAPACITY TO WITHSTAND POOR TEACHING, (5) FLEXIBILITY IN ACCOMMODATING LEARNERS WITH VARYING LITERACY LEVELS AND EDUCATIONAL BACKGROUNDS, (6) LEVEL OF INTEREST, (7) FEASIBILITY, AND (8) CONTRIBUTION TO THE POSITIVE EDUCATION AND SOCIAL EXPERIENCE OF LEARNERS. THIRTY-NINE REFERENCES WERE INCLUDED. (LY)

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Conducted by
Greenleigh Associates, Inc.
New York Chicago San Francisco

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SELECTED ADULT BASIC EDUCATION SYSTEMS

September 1966

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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September 23, 1966

Mr. Donald Hess
Program Planning
Community Action Program
Office of Economic Opportunity
Executive Office of the President
Washington, D.C. 20506

Dear Mr. Hess:

We are pleased to submit this final report of the Field Test and Evaluation of Selected Adult Basic Education Systems. This was a large-scale evaluation of four reading systems which have been developed for functionally illiterate adults.

This cooperative research project, involving the Office of Economic Opportunity, the Welfare Administration, the Office of Education, and Greenleigh Associates, began on March 1, 1965 and was conducted in the states of California, New Jersey and New York. Thirty-one different governmental jurisdictions were involved, including state education and state welfare departments, county welfare departments, and local school districts.

The factual data about student gain scores, the reading systems and student reactions to the literacy classes were arrived at through a thorough testing program and a plan of systematic observation of the classes. In the total project some 3,000 potential students were screened to determine their reading level, and approximately 1,100 who were assigned completed the seventeen weeks of classroom instruction. Although in each state there were dropouts of assigned students before classes began, almost all who remained for the first week continued to the end. Dropouts after the first week were due primarily to illness, child care or other personal problems.

This project leaves many questions still unanswered in the field of adult basic education. There is need for continuing research and study regarding what attributes should be sought in selecting teachers of adult illiterates, what kind of preservice and on-the-job training programs should be devised for the teachers, what kinds of tests should be used to measure reading gains, and how curriculum should be built. The field test has shown in general that, given a reading system to follow, a high school graduate can be as effective as a certified elementary school teacher in teaching adults to read. It also points up the need to build adult basic education into the ongoing school system with teachers trained in this specialized area of education.

This project required appreciably more time than had been originally anticipated. This was due to the fact that securing Federal funds through state plans and special projects was time-consuming. In addition, numerous delays were encountered. Time was also lost in getting all of the cooperating agencies working together on this research project to plan for and to carry out the recruitment of students, the arrangements for classes, and the selection and training of teachers.

We can not speak too highly of the caliber of cooperation we received from both education and welfare at all three levels of government in implementing and carrying the project to its conclusion. There were many problems that had to be resolved, but each cooperating agency worked diligently and with commitment. This was true despite the fact that this project was only one of many new endeavors each was undertaking.

We are especially grateful for the whole-hearted cooperation of Dr. Sanford Kravitz of the Office of Economic Opportunity, the Project Manager. In addition, we should like to express our deep appreciation to Mr. Charles Lavin, who was assigned as liaison by the Welfare Administration, and to Dr. Roy Minnis, who was assigned as liaison by the Office of Education.

We are confident that this report will be of use to all who wish to undertake an adult basic education program. We are equally convinced that the problem of adult illiteracy needs to be attacked on a mass basis, that it should carry the majority through high school, and that such programs should be available to every adult who has not attained a high school education.

We wish to express our deep appreciation to all who have in any way cooperated in this endeavor.

Sincerely,

Arthur Greenleigh

Arthur Greenleigh
President

AG/sbd

cc: Mr. Charles Lavin, Welfare Administration
Mr. Derek Nunney, Office of Education

ACKNOWLEDGEMENTS

We wish to express our appreciation to all who participated in the planning and conducting of this field test. It is not possible to give individual recognition to all of the persons who played a role in this project.

The Commissioners of Welfare and Education each had a part. Each of the state commissioners of education and welfare were involved at the outset. Many people in each of the Federal and state agencies were involved in the study at some point. We have tried to give recognition here, however, only to those persons who played major roles. Even in this we have not included everyone.

There were 108 teachers whom we wish to recognize, but who are not named as individuals. There were some thirty casework counselors and community aides who played an essential part, but are not recognized individually. However, without the dedicated work of the teachers and the casework staff this project could not have been carried on.

The students who participated in the classes and helped to evaluate the experience should also be recognized. Throughout the project they took an active interest in the research being carried on and felt the responsibility of their role. In truth this was cooperative research.

We do wish to give special recognition to Dr. Sanford Kravitz who was the project manager for the Office of Economic Opportunity. He played a main part in initiating the study, calling meetings of the cooperating Federal agencies and in making joint decisions as the project progressed. In addition we wish to express our appreciation of the time and effort given the project by Mr. Charles Lavin who was designated as liaison to the project by the Welfare Administration and to Dr. Roy Minnis who carried similar responsibility for the Office of Education. To these men fell the responsibility of securing the cooperation of their counterparts in the three states, calling meetings of state personnel, and they were particularly helpful in the numerous joint decisions made in relation to the materials to be tested and tests to be used.

While we cannot recognize all of the persons in Greenleigh Associates, the Federal agencies, the state departments of education and welfare, or the county departments of welfare and local boards of education who devoted time to the project, we do wish to mention those persons who played a major

role either in the conception of the study, the operation of the project or analysis of the data. These persons were:

Greenleigh Associates, Inc.

Headquarters Staff

Robert B. Lefferts, Senior Consultant, who worked on the original design

Sybil Lefferts, Special Assistant, who worked on the final report

Paula Resnick, Research Associate, who had major responsibility for the preparation of the statistical analysis and interpretation of the data

Rita Smith, Research Associate, who participated in the preparation of the data

Field Staff

Dr. James S. Aven, Assistant Project Director

Fred Barstow, Project Supervisor in California

Lewis T. Brown, Assistant Supervisor in California

John Dopyera, Project Supervisor in New York

Irving Naiman, Project Supervisor in New Jersey

Norman Roseman, Assistant Supervisor in New York

Harry Van Houten, Assistant Supervisor in New Jersey

Special Consultants

Dr. Jacob Cohen, Professor of Psychology, New York University, who provided overall consultation on the statistical analysis

Dr. H. Harry Giles, Professor of Education, New York University, who worked on the original design and the analysis of the data

Dr. Edith Grotberg, Professor of Education, American University, who provided technical assistance in devising the plan for the statistical analysis

Federal Agency Officials

Edward Brice, Office of Education

Barbara Coughlin, Welfare Administration

Dorothy Druschel, Region IX, Department of Health, Education and Welfare

Leo Feider, Region II, Department of Health, Education and Welfare

Jenny Clyde-Hollis, Office of Education

Derek Nunney, Office of Education

Jules O. Pagano, Office of Education

Douglas Porter, Office of Education

Wade Robinson, Office of Education

Ronald Shilen, Office of Economic Opportunity

Andrew Truelson, Welfare Administration

State and Local Agency Officials in California

State Department of Education

Stanley Sworder, Chief, Bureau Adult Education

William J. J. Smith, Consultant in Adult Education

State Department of Social Welfare

Eunice Evans, Chief Deputy Director

John E. Harris, Coordinator, Title V Programs

Bert Walters, Consultant, Title V

Contra Costa County Education and Welfare Staff

J. Wilson Bilyeu, Director, Vocational and Adult Education

Wayne Boulding, Superintendent, Liberty Union High School District

Carroll Boyd, Supervisor, Pleasant Hill and Pittsburg Districts, Department of Social Service

William Bristow, Adult Education, Liberty Union High School District

Donald Crawford, Economic Opportunity Projects Coordinator, Department of Social Service

James Dent, Superintendent, Mt. Diablo Unified School District

Lester Haagenson, Principal, Mt. Diablo Evening School

Charles Haworth, Superintendent, Pittsburg Unified School District

Thalbert M. Honea, Principal, Adult School, Pittsburg Unified School District

Clarence Jackson, Social Worker Supervisor, Richmond District, Department of Social Service

Robert Jornlin, Director, Department of Social Service

Wesley Laubscher, Coordinator, Adult Education Program, Mt. Diablo Unified School District

Veryl Lewis, Supervisor, Richmond District, Department of Social Service

Floyd I. Marchus, County Superintendent of Schools

James Merrihew, Superintendent, Richmond Unified School District

Randy Oberlatz, Adult Basic Education Supervisor, Department of Social Service

James Reusswig, Superintendent, Antioch Unified School District

Fred Ripp, Social Worker Supervisor, East County, Department of Social Service

Harrison Scott, Director, Adult Education, Richmond Unified School District

James Scott, Adult Education, Liberty Union High School District

Harold Stiles, Principal, Evening High School, Antioch Unified School District

Robert Williams, Coordinator, Adult Education Program, Richmond Unified School District

State and Local Agency Officials in New Jersey

Bureau of Adult Education, State Department of Education

Clyde Weinhold, Director

Bernard Downey, Supervisor, Adult Basic Education

Rocco Gambacorta, Administrator, Adult Basic Education

William G. Nestor, Coordinator, Adult Basic Education

Division of Public Welfare, State Department of Institutions and Agencies

Irving J. Engleman, Director

George N. Kambis, Title V Projects Consultant

Nicholas J. Perronni, Supervising Auditor, Title V Projects

Philip Petito, Assistant Chief, Bureau of Assistance

John A. Taylor, Coordinator, Title V Projects

Camden County Education and Welfare Staff

Dr. Anthony R. Catrambone, Superintendent, Camden City Public Schools

Aaron DeKosky, Coordinator, Adult and Community Programs, Camden City Public Schools

Mary Mahon, Assistant to Coordinator of Adult & Community Programs, Camden City Public Schools

Fred L. Streng, Director, Camden County Welfare Board

Thomas Tull, Project Manager, Title V, Project 4

Passaic County Education and Welfare Staff

Peter Cannici, Superintendent of Schools, Passaic

Edward M. Fitzgibbons, Educational Supervisor, Field Test, Paterson and Passaic

Dr. Michael Gioia, Superintendent of School, Paterson

Joseph Greene, Director, Passaic County Welfare Board

Louis H. Katz, Assistant Project Manager, Title V, Project 4

George J. Koch, Director, Adult Education Programs, Paterson

Charles J. Riley, Secretary, Board of Education, Paterson

Sam Shey, Director, Adult Education Programs, Passaic

State and Local Agency Officials in New York

Division of Continuing Education, State Education Department

R. J. Pulling, Director

A. T. Houghton, Chief, Bureau of Basic Continuing Education

Harvey Johnson, Associate in Continuing Education

Joseph Mangano, Associate in Continuing Education

Lois Mathison, Associate in Continuing Education

State Department of Social Welfare

Kalman Mintz, Director, Bureau of Program Standards

C. Walter Driscoll, Area Director, Onondaga and Oneida Counties

Paul Kearney, Senior Welfare Consultant, Title V

Patrick Kelly, Senior Welfare Representative

Gertrude McLean, Senior Welfare Representative

Clarissa Nichol, Senior Welfare Representative

Max Waldgeir, Area Director, Nassau County

Nassau County Education and Welfare Staff

Joseph Barbaro, Commissioner, Nassau County Department of Welfare

Albert Brinkman, Superintendent of Schools, Glen Cove

Robert Cody, Director of Adult Education, Hempstead Public Schools

Harold Donahue, Administrative Assistant, Glen Cove Public Schools

Irene M. Dwyer, First Deputy Commissioner, Social Services, Nassau County Department of Welfare

Benjamin V. Louard, Assistant Project Director, Title V Projects, Nassau County Department of Welfare

Michael Maglio, Director of Adult Education, Long Beach Public Schools

Carl W. Monk, Director of Adult Education, Westbury Public Schools

William A. Parker, Director of Adult Education, Freeport Public Schools

Cecil L. Rice, Superintendent of Schools, Westbury

Melvin Rosen, Director of Adult Education, Glen Cove Public Schools

Thomas D. Sheldon, Superintendent of Schools, Hempstead

Earl Soper, Superintendent of Schools, Long Beach

Edward Welling, Superintendent of Schools, Freeport

Syracuse Education and Welfare Staff

Franklin S. Barry, Superintendent of Schools

William Jacques, Director of Adult Basic Education

John Lascaris, Commissioner, Onondaga County Department of Welfare

Robert F. Mayer, Director, Title V Projects

Jesse Ross, Assistant Superintendent of Adult Education

Utica Education and Welfare Staff

Michael J. McGuirl, Commissioner, Oneida County Department of Welfare

Sherman R. Mears, Director, Manpower Development and
Federally Aided Adult Basic Education

Theodore F. Reusswig, Superintendent of Schools

Glattus Wasmund, Project Director, Title V and
Economic Opportunity Act, Work Experience

Publisher's Representatives

Jerome Bernstein, Science Research Associates, Inc.

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Hazel S. McCalley, Ph. D.
Project Director and Vice President

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I. INTRODUCTION

This is a report of the findings of a large-scale field test of four reading systems which have been developed for functionally illiterate adults. It describes the results of the field test conducted in three states which involved thirty-one different Federal, state and local agencies, almost 1,900 public welfare recipients reading below the fifth-grade level, and 108 teachers with varying levels of preparation for the task assigned.

The field test was conducted by Greenleigh Associates under contract OEO-89 for the Office of Economic Opportunity in cooperation with the Office of Education and the Welfare Administration.

A. Purpose and Rationale of the Field Test

The purpose and need for this project were stated in the proposal which lead to the field test as follows:

> The purpose of the proposed project would be to evaluate the effectiveness of selected learning systems in a large-scale field test with economically dependent adults.
>
> The inability of millions of Americans to participate in and contribute to the mainstream of economic and social life in the United States due to lack of basic education has been well documented. These individuals are seriously handicapped in developing and utilizing their actual potential because of lack of basic educational skills. The severest educational problem lies with those who are functionally illiterate, that is, those who lack even an eighth-grade reading ability and are, therefore, deprived of the necessary background for effective performance as trainees, as employees, and as citizens.
>
> As new Federal, state and local efforts aimed at meeting the problems of poverty have been developed, there has been a recognition of the importance of including massive basic education programs to provide millions of functionally illiterate citizens with basic reading skills to open the door to further training, to larger participation in social, political and economic life, and to a more satisfying existence.

> Recognition of this problem and a determination to correct it, however, do not solve the problem. The critical question of 'how' still remains. It is toward this question that the proposed project would be directed. There have been developed a wide range of learning systems and materials by private publishers, educators, research organizations and others. These systems are largely untested with the functionally illiterate population eighteen years of age and over. Thus, the ability of Federal, state and local governmental agencies to mount a large-scale program of basic education is seriously limited unless objective field testing and evaluation of the effectiveness of the newer, more promising learning systems is carried out in the immediate future.
>
> The purpose of the proposed project would be to carry out a sufficiently large field test of the more promising learning systems with an acceptable research design which would include varying levels of descriptive analysis and evaluation of their effectiveness with an accessible 'high risk' population of public assistance recipients who have different ethnic, social and educational characteristics.

The problem of functional illiteracy is well recognized. It is not the intention of this report to document the seriousness of the problem nor the tragedy and waste of human beings that result. Neither is it the intention to describe the scope of the problem, except to state that the estimates of the number of functionally illiterate adults in the United States is upwards of ten million.

At the same time that there is general recognition of the problem, it is also recognized that the techniques for solving the problem have not been perfected. It is true that some people will learn to read regardless of the materials used and the effectiveness of the teacher. For these persons, "Dick and Jane," the daily newspaper, advertisements on packages, and any other reading material would be stimulating. However, even for persons so eager to learn, materials adapted to the adult world are more interesting and facilitate learning.

Most illiterate and semiliterate adults, however, are not so highly motivated. They are ashamed of not being able to read and try to cover up the fact. It is difficult to recruit them for a remedial or compensatory program, and once recruited, beginning motivation is often low. They resent being talked down to through books or by teachers. In order to hold their interest and help them understand the importance of reading, instructional materials need to be geared to their real-life adult world.

The functionally illiterate adult, unlike the child entering school for the first time, has had a wealth of life experiences. He is not without knowledge, although he is lacking in the specific knowledge related to educational pursuits. He is not lacking in knowledge about human relationships, the world of work, family problems and community pressures. What he wants, if he can express it, is education which will help him function better in the adult world he knows. He wants knowledge that he can apply to his day-to-day life.

These adults do not fit any one pattern. They do not form a homogeneous group. There are differences in age, sex and ethnic background which account for various levels of understanding and knowledge. They have many different reasons for wanting to learn: to be able to help children with school work, to better qualify for a job, to be able to read bus and street signs and move around the community freely, to have the respect of family or neighbors, to prepare for training in job skills, or simply to be able to enter the world of books. Thus, teaching illiterate adults is a complex problem, and the development of strategies for a large-scale attack on the problem is also complex.

The results of the field test substantiate the feeling among adult educators that a good many learning systems are inadequate, and perhaps there is none that is fully suitable for the semiliterate and illiterate poor. On the other hand, the evidence indicates that there are available systems that can be used with success by teachers without the usual credentials, but with qualities of heart and mind which make them responsive to their students as human beings with potentialities that can be developed. And, it served to identify many possibilities which could be developed in all fifty states through the cooperative efforts of public agencies, especially education, welfare and health.

B. Design of the Field Test

As has been stated, the central purpose of the experimental work was seen as primarily an evaluation of the effectiveness of selected learning systems in a large-scale field test with economically dependent adults. There were, in addition, some operational objectives of the project which were:

> To provide overall planning out of which the proposed field test could be formulated.
>
> To define the nature and scope of the proposed field test, ascertain the participation necessary to its success, and define the roles of the participating elements.

To identify the basic learning systems, materials and teaching situations best suited to bring functionally illiterate adults to a learning level that would significantly improve their educational, economic, and social situation within a reasonable period of time.

To ascertain the ways in which existing basic education systems may be adapted and improved to be more effective in raising the basic education levels of adults.

It was foreseen that there were nine steps to be taken to set the field test into operation, and these were called "action components" to distinguish them from the items in the general plan for establishing the research components. The nine steps were the following:

1. Action Components

a. Selection of Learning Systems

The selection of the specific learning systems to be included in the field test was to be made jointly by the Office of Education, the Welfare Administration, and the Office of Economic Opportunity, using criteria developed by the Office of Education. In accordance with preliminary consultations with the three Federal agencies, it was proposed that four different learning systems be selected for initial testing.

A thorough canvas was made of the available materials suitable for adults which would take the students from below the fifth-grade through the eighth-grade level. The process used is explained in detail in Chapter III. This canvas and the joint action of the cooperating agencies resulted in the selection of these four systems:

"Learning to Read and Spell"
American Incentive to Read

"Reading in High Gear"
Science Research Associates, Inc.

"The Mott Basic Language Skills Program"
Allied Education Council

"Systems for Success"
Follett Publishing Company

b. Location

A series of field locations were established in each of three selected states which were ready, willing and able to participate in the field test.

As will be seen in Chapter III, The History of the Project, it was not easy to find states which would cooperate under the pressure of time and uncertainties of funding arrangements which prevailed at the outset. In three states selected, New York, New Jersey and California, these and other difficulties made the problem of securing county and local cooperation complex. The final selection gave a reasonably varied and representative series of locations--Syracuse and Utica upstate, and Nassau County downstate, in New York, including the towns of Hempstead, Freeport, Glen Cove, Long Beach, and Westbury; Camden, Paterson and Passaic in New Jersey; and in Contra Costa County in California, the unified school districts of Richmond, Pittsburg, Mount Diablo and Antioch, and the Liberty Union high school district. In California the County superintendent of Schools' office played an important role as liaison between the State department and the School districts.

These cities and counties provided a mix of urban and rural residents, as well as diverse ethnic groups.

c. Auspices

The auspices for the classes in each of the participating states were the respective state education and welfare departments. However, the day-to-day operation of the education program was the responsibility of each participating school district, and the supportive services to adult students were the responsibility of each county welfare department.

d. Learner Population

The learner population was composed of public assistance recipients aged eighteen years and over who were functionally illiterate and not in school. For purposes of this project, a functionally illiterate person was defined as one with reading ability below the fifth-grade level. The planned total number of learners to be enrolled in the field test classes was 540 in each state.

e. Level of Teacher Preparation

The field test provided for testing of learning systems under three different teaching situations, or levels of academic preparation of the teachers: (1) trained teachers, preferably experienced in adult education, (2) college graduates, and (3) high school graduates.

f. Organization of Classes

Thirty-six classes of fifteen students each were organized in the three participating states. There were, thus, nine classes using each of the four reading systems selected for testing.

Among the nine classes using a given system were three classes using one of the teaching situations or levels described above. Therefore, in each of the three states, the organization of classes was as follows:

	Number of Classes			
Level of Teacher Preparation	Learning System I	Learning System II	Learning System III	Learning System IV
Certified Teacher (preferably Adult Education)	3	3	3	3
College Graduate	3	3	3	3
High School Graduate	3	3	3	3

The classes were held for five hours a day, five days a week, for seventeen weeks. All classes operated the same number of hours per day and days per week.

Classes were held in available buildings in as simple a setting as possible. Some classes were conducted in schools and others in various community facilities such as churches, neighborhood centers and store fronts.

g. Control Group

In addition to the 540 in each state who were to be in classes, it was planned to establish a control group of 125 public assistance recipients similar in literacy level and other respects to the learner population as described above, selected on a random basis. They were not to be given any adult basic education during the period of the field test, but would be given the same tests as the learner population at the beginning and end of the field test period. In addition, basic social, economic and other characteristics would be ascertained about the individuals in the control group, as in the learner group.

However, difficulties of recruiting enough students made it impossible to continue this desirable aspect of the plan in its entirety. A small group of controls were studied, and the results are reported in the findings. However, though these results tend to confirm the fact that the field instruction made substantial gains possible for the learners beyond that achieved by the controls, the number of the latter is insufficient for the original purpose.

h. Selection and Assignment of Teachers

Teachers were selected by local school districts in consultation with the project staff according to criteria agreed upon by the three Federal agencies. Selection criteria in addition to level of teacher preparation included interest, warmth, motivation, flexibility, understanding, patience, maturity and the ability to become involved positively in an assignment of this kind. Each classification of teacher was assigned to his specific learning system on a random basis.

The teachers were briefly oriented to the project and its purposes and procedures by the project staff. They were also given preservice orientation and training in the particular learning system they would be using; this was conducted by the representative of the publisher of the system. The publishers or developers of the learning systems to be evaluated were invited to provide additional teacher training in their own learning system beyond the initial period of preservice training if they felt it desirable.

i. Selection and Assignment of Students and Control Groups

The county welfare departments had responsibility for informing public assistance recipients of the availability of the learning classes, for recruiting and referring potential learners and providing supportive services to the students. Selection of learners was made from among those who fulfilled screening conditions and in accordance with criteria of the project relating to age, sex and ethnic background. Placement of students in classes was on a random basis. It was hoped that through the selection process a representative range of literacy and mental abilities of the learners, and a sufficient representation of population subgroups would be assured. This proved to be generally so, as can be seen in the tables in Appendix A.

2. Research Components

a. Data Collection and Use

The plan for the research components employed two basic approaches to the collection and use of data. The first approach provided for a series of objective measures of the specified goals for the reading systems, together with measures of the extent to which certain evaluative criteria were met.

The second approach involved expert observation of selected classroom situations in order to gather descriptive information and analyze both process and content. The purpose was to provide evaluative insights and information that would help the publishers, developers or sponsors improve their specific systems.

During the initial phase of the project, representatives of publishers or sponsors had an opportunity to observe the use of, and refine, their own systems if they desired. Project field staff in each of the three states carried out systematic observations on a regular schedule. At the same time, there was sufficient flexibility in the observation process so that classroom observation could be concentrated in the most productive areas. For instance, if in the classroom observation a new or intervening variable was identified, it could be followed up.

1) Data on Learners and Control Group

Selected data regarding each learner were collected at the beginning of the project and punched on IBM cards along with data regarding his progress in the program at various intervals. Precoded instruments were used which included information on variables such as sex, age, race or ethnic origin, employment history, education, urban-rural background, previous training, family structure, dependency history, attitudes toward learning, intelligence level and initial reading level, using standardized tests. At various intervals, the learning progress of each individual was ascertained. It was also measured at the end of the course. The degree and nature of participation of the learner was recorded, including attendance.

Similar data were obtained on the control group.

2) Data on Teachers

Teachers were interviewed and significant data were recorded regarding age, sex, education, motivation, ethnic and economic background.

3) Data on Characteristics of Learning Systems

In order to provide operational definitions of the four learning systems, descriptive information was obtained from the publisher or sponsor of each.

b. Criteria for Evaluation

A set of criteria was employed in evaluating the effectiveness of the various systems. These criteria were related to the specific social, educational and economic goals of the project and to factors that should be taken into account in evaluating the learning materials and systems. These criteria and the measures that would be used for evaluative purposes are described as follows:

Criterion One:	To teach functionally illiterate individuals to read in the shortest possible time.

Measures: Change in reading level of each learner as recorded on selected standard achievement tests at specified time intervals, such as at the beginning of the course, halfway through, and at the end of the course. The specific tests to be used were selected jointly by the Office of Education, Office of Economic Opportunity, and Greenleigh Associates.

Criterion Two: To improve the ability of functionally illiterate individuals to qualify for occupational training or for available job opportunities.

Measures: Through objective data regarding numbers who become eligible for training programs, employment or in other ways improve their economic position by the end of the course.

In addition, reading levels required for particular types of training programs and entry level positions could be related to reading levels achieved in the reading systems in the field test.

Criterion Three: To enhance the ability of functionally illiterate individuals to better meet their adult responsibilities.

Measures: Through questionnaires at beginning and end of course, supplemented by interviews of a subsample, to obtain data on attitudes and experience regarding education, citizenship, voting and aspirations. An assessment was also made of improvement in such secondary factors as self-expression and social adaptation.

Criterion Four: To identify those learning systems that have a high degree of teachability, calling for the least possible skill on the part of the teachers and the capacity to withstand poor teaching.

Measures: Analysis and cross comparison of data on rate and degree of improvement in reading levels by learners in each of the three different teaching situations. These reading data were related to data regarding other characteristics of the teachers. In addition, there was periodic observation in the classroom by expert observers using a standard systematic observation method. Observers were able to specify through descriptive material the nature of the teacher-learner reading program interaction and identify the extent to which the reading program can withstand adverse factors in teacher-learner situations.

Criterion Five: To ascertain the extent to which the learning system is flexible in its entry level because it can accommodate learners at different levels of literacy and different educational backgrounds.

Measures: Analysis of initial and subsequent tests of reading achievement with variables regarding characteristics of the learners, e.g., age, previous education, ethnicity, etc.

Criterion Six: To assess the extent to which the learning system provides a high level of interest and can "hold" learners.

Measures: Analysis of learning progress at different points in time; classroom observation; dropout rates, points at which dropouts occur and reasons for dropouts; attendance; etc. Learners were given opportunity to evaluate their own experience.

Criterion Seven: To determine the extent to which the system is operationally feasible.

Measures: Analysis of cost data and relationships of costs to speed and level of achievement, ability of system to be used for large numbers of learners with minimum of equipment, teacher skill and training, etc.

Criterion Eight: To ascertain the extent to which the learning system contributes to a positive educational and social experience for the learner.

Measures: By observation of materials and classroom situation to ascertain (a) if the program builds on readiness, interest and background of learners; (b) if it is related to real life experiences of learners; (c) if it provides a system of rewards and satisfactions; (d) if it contributes to self-respect on the part of learners; (e) if the task duration can be adjusted to attention span; (f) if there is provision for group reinforcement; (g) if it allows for atmosphere of rapport and freedom in the learning situation; and (h) if it contributes to motivation for further learning.

3. Project Administration

The project was to be planned and administered over all by Greenleigh Associates, Inc. Certain aspects of the project called for the cooperation and assumption of specific administrative responsibilities by the Office of Economic Opportunity, the Welfare Administration, the Office of Education,

CHART 1. ADMINISTRATIVE RESPONSIBILITIES

	Greenleigh Assoc.	O E O	Welf. Admin.	Office of Educ.	State 1/ Ed. Dept.	State 1/ Welf. Dept.	Publishers	Houghton Mifflin
Overall planning, administration, supervision and direction	X							
Definition of research problem and role of participants	X							
Research evaluation	X							
Selection of states	X	X	X	X				
Criteria for selection of systems	X	X		X				
Selection of systems	X	X	X	X				
Selection of teachers					X			
Teacher orientation to project	X							
Teacher training in learning system							X	
Recruitment and referral of learners						X		
Selection of learners and control group	X				X			
Supportive services to students						X		
Provision of materials					X			
Provision of classroom space and equipment					X			
Achievement and intelligence tests	X				X			
Questionnaires and interviewing	X					X		
Administrative supervision of classes					X			
Observation for evaluation	X							
Observation for improvement of materials	X				X		X	
Data processing and analysis	X							
Progress and final reports	X							
Teacher training in administration of Iowa Test of Basic Skills and Lorge-Thorndike Intelligence Test								X

1/ Most of these responsibilities were actually carried out by the local school districts and county welfare departments in consultation with their state departments.

and the state education and welfare departments. Other aspects entailed cooperation and participation of the publishers of the particular learning systems. The chart on the preceding page shows the distribution of these various responsibilities.

As detailed in Chapter III the general plan was followed. But it is important to note that at many points, some not foreseen, it was necessary for Greenleigh Associates to assist and stimulate action, and to serve as a general facilitator of communication and coordination. The need for such facilitation was no doubt due in part to the fact that such a cooperative undertaking was new to some education and welfare departments. But the urgency of problems and the need for quick action for their best resolution suggests that some "third force" may be needed in the development of such programs.

4. Time Schedule

In the original plan, the field test was to be conducted initially in two different states with consideration given to expanding the field test to three additional states after the project was fully mounted. However, it was necessary to include three states at the outset.

The estimate of the total time required for the field test in the two states was seventeen months. The preparatory work began March 1, 1965, and the three-state project continued until September 30, 1966, a total of nineteen months. During this time, many difficulties had to be overcome, such as the decision of several local jurisdictions not to participate, the fact that two of the reading systems selected were not available until after September 1965, and the delay in final commitment in California. As a result, the initiation of the project and the operation of the classrooms began in New Jersey, using two systems only, in August 1965 and ended in California in May 1966, a total duration of ten months.

Editing and coding of project instruments and processing of data began in September 1965 and ended in August 1966, a total of eleven months. The analysis of data and preparation of three progress reports and the final report were done between February and September 1966, a seven-month period.

5. The Systems and the Research Instruments

Detailed descriptions of the systems, the research instruments and statistical measures utilized are in later sections of this document. In summary, these were:

a. The four basic systems which are discussed in detail in Chapter VIII, are the products of the following publishers:

American Incentive to Read (AIR)
Science Research Associates, Inc. (SRA)
Allied Education Council (Mott)
Follett Publishing Company (Follett)

b. The social studies and arithmetic materials produced by USAFI (United States Armed Forces Institute).

c. For screening of learners, the Bender-Gestalt test, the Vocabulary List (words from Wechsler Adult Intelligence Scale) and Gray's Oral Reading Paragraphs were used.[1/]

d. At various points during the field test the following were used:

Iowa Tests of Basic Skills - fifth day, thirty-fifth day, sixty-fifth day, eighty-first day. There were four tests given.

Lorge-Thorndike Intelligence Scale - fortieth day. Publishers' tests in basic education systems were used at any time.

6. Curriculum and Daily Schedule

a. Two and one-half hours each morning were focused on the basic education systems materials. A one-half hour coffee break was scheduled but not included in the two and one-half hour period. This was considered essential for adults not accustomed to sitting for long periods, but even more important for socializing.

b. The afternoon was divided into fifty minutes for arithmetic and fifty minutes for social studies.

c. All testing, except publishers' tests of systems, was conducted in the afternoon sessions; publishers' tests were conducted in the morning.

d. All interviews, discussions and evaluative instruments were completed in the afternoon sessions.

e. Field trips, planned in conjunction with the social studies activities, were taken in the afternoon by some classes.

1/ Publisher's materials use various designations for this test, e.g., Gray's Oral Reading Paragraphs, Gray Oral Reading Test; usage in this report is likewise varied.

7. Presentation of the Results of the Field Test

The data is presented in this descriptive analytical report in text and tables. In order that this report may be of maximum use to those developing learning systems and to those responsible for the administration of basic education programs for adults at the Federal, state and local levels, any insights that were gained even though they do not directly relate to the major purpose are reported and discussed.

Conclusions are presented regarding the evaluation of the effectiveness, weaknesses, and strengths of the various systems included in the field test under varying teacher situations and with subgroups in the target population. Conclusions are also offered regarding further improvement and adaptation of basic education programs in relation to the needs of particular subgroups within the broad functionally illiterate population, and other potential improvements.

The basic analytical tools used in determining the significance of gain differences by reading systems and level of teachers were analysis of variance and a correlation matrix. These same analytical tools were used to test differences in gain scores for the variables of sex, age and ethnic background.

II. SUMMARY OF FINDINGS AND RECOMMENDATIONS

A. Highlights of Findings

1. Almost all students showed some gain in reading ability during the field test. However, there was no significant difference in student gain scores by reading systems.

2. There were no significant differences in gain scores from the first to the final Gray Oral tests by level of teacher preparation. However, on some Iowa subtests there were significant differences in gain scores by level of teacher. In every case where these differences were significant, it was at the level of the high school graduate teacher.

3. Although all systems and teacher levels were tested by the same instruments, the instruments themselves are not standardized for this population. Actual gain according to teacher and observer judgment was probably in excess of the gain measured by the test.

4. On the basis of observation, certified teachers had the most skill in dealing with learning problems, grouping students and class management. The research design restricted all teachers to the publishers' instructions. Two reading systems, however, encouraged teacher innovation and use of supplementary materials. Even so, classes with certified teachers using these systems did not have significant differences in gain scores. This raises the question of the relative importance of accepted class management techniques in teaching adult basic literacy classes.

5. There was significant correlation between the initial Gray Oral and Iowa test composite scores and the final Gray and Iowa composite scores.

6. There was a highly significant correlation between the final Gray scores and the gain scores, but no correlation between the initial Gray scores and the gain scores. Students who scored highest made the most gain, and amount of gain was not predictable from initial level.

7. None of the four systems were able to bring the majority of students from the 4.9 grade level or below to the eighth-grade level in seventeen weeks of two and one-half hour daily use. However, all of the systems brought some students to the eighth-grade level.

8. The achievement and intelligence tests used in this field test lacked reliability and validity for this adult population. These were neither geared to the knowledge base of the students nor standardized with this population.

9. Paper and pencil tests, particularly those with IBM score sheets, are threatening to the functionally illiterate adult. Some have had little experience in manipulating a pencil, few are accustomed to reading instructions and following them, eyesight is frequently faulty making it difficult to distinguish the proper code to mark, and working against time deadlines creates frustration. The teachers received careful training in the administration of these tests by Houghton-Mifflin (publisher of the test) representatives, however, despite this, test taking was threatening.

10. There is need to teach these adults how to take pencil and paper tests. Inability to pass civil service system tests and tests administered by personnel departments frequently is the reason an adult, although literate, cannot obtain a job.

11. The students were almost unanimous in their expression of appreciation for their teachers. They were also appreciative of the opportunity to learn arithmetic. Social studies on the whole was not as popular, but certain kinds of materials like information about civil rights, Negro history and local community affairs were most appealing.

12. The vast majority of students expressed great appreciation for the opportunity to learn basic literacy skills. Almost all approved of the reading system they used. There was, however, criticism of slang used in one system and stories of persons on public welfare in another system. Students obviously want to read good English and about things "the teacher knows," not what they know.

13. According to the statements of students in interviews, there was considerable learning beyond classroom subject material. They learned that they could learn. They learned new self-esteem, to speak up in a group, and to work and mingle with persons of many different backgrounds. The classes had a positive effect on family relationships, community relationships and ability to travel around the community.

14. It is not possible to obtain data on attitude changes of these students by using a form administered to a group. This can be done only through individual interviews because any responses in a group situation are affected by interaction. This is because functionally illiterate adults have to have the questions read aloud and interpreted, which leads to group discussion. Therefore, responses are group responses--not individual responses.

15. When more than one agency is involved in cooperative research, coordination does not occur spontaneously. A third party is necessary to bring the cooperating agencies together, to maintain communications, and to assure that time schedules are kept. This is not due to any lack of willingness to cooperate, but rather to the fact that no one cooperating agency is responsible for seeing that cooperation takes place.

16. The different Federal funding arrangements make it difficult for states and localities to plan for continuing cooperation. Since the time limits on available funds vary from source to source and methods of obtaining funds differ, it is impossible for one agency to guarantee that it can cooperate beyond a given point. Thus, long-range cooperative plans to carry students through a complete basic education experience cannot be made. This problem became acute as the field test came to a close and students were clamoring to know "what next?"

17. States are not willing to plan for programs until they have the Federal funds; similarly, local communities will not plan until there are funds from the state. All have experienced making plans on the basis of announcements that funds would become available, then having them fail to materialize. The curtailment of Title II-B funds during the course of the field test threatened the completion of this project in all states, made it impossible to plan for continuing programs for these students, and created considerable frustration. Although the funds were reinstated, much time had been lost and confidence shaken in commitments of the Federal government.

18. If students from the poverty population are to be able to attend classes regularly, back-up services like those given by the welfare departments are essential. Transportation, child care, and health problems are continuing problems which most students cannot handle without help.

19. Teachers require more supervision than they received during the field test and continuing inservice training.

20. Attendance is affected adversely by any delay in funds to meet the costs of attending classes and to pay for child care. On the days the welfare checks are expected in the mail, and in some communities, when surplus commodities are available only on given days, student attendance suffers.

B. Highlights of Recommendations

1. All of the reading systems in the field test need to be substantially improved and adapted to the needs of disadvantaged adults.

2. Better supplementary instructional materials need to be developed, especially in arithmetic, social studies, health and the world of work.

3. Instructional materials should not talk down to the students and should be devised for adult students at below fifth-grade reading level and extending through eighth grade.

4. New achievement and intelligence tests should be developed that are applicable to educationally and economically deprived adults.

5. Although not supported by gain scores, on the basis of observation, it seems that teachers for adult basic education should be selected for their warmth, interest, motivation, flexibility, understanding and patience.

6. On the basis of Iowa gain scores alone, teachers who had no more than a high school education were more effective. Therefore, in planning for adult basic education, persons who are high school graduates should be considered an important resource and should be recruited. The fact that the majority of high school graduates, unlike the college graduates and certified teachers, were Negro and the majority of students were also Negro may have contributed to the better success in terms of gain scores of the high school graduate.

7. All prospective teachers in adult basic education should be given several weeks of preservice training.

8. All classroom teachers in adult basic education should have supervision by a master teacher expert in education of disadvantaged adults. Also, continuous inservice training should be provided.

9. On the basis of observation, where feasible, multilingual teachers should be assigned to classes of adult students who have little or no proficiency with the English language or bilingual students assigned to permit a "buddy system."

10. The curriculum for adult basic education should include information about the world of work, how to apply for jobs, and how to take various qualifying tests, especially paper and pencil tests.

11. Supportive services to assist adult students to remain in school should be provided, such as assistance in arrangements for transportation, child care, physicians' appointments and follow-up of absentees.

12. To the extent possible, classes should be held in the daytime for five days a week to maximize the learning. For mothers with small children, day care facilities should be provided, preferably at the school.

13. Adult basic education should be made available for every adult who needs it, regardless of socio-economic status.

14. Counseling and guidance services should be made available to all students at the outset and throughout the adult basic education process.

III. HISTORY OF THE FIELD TEST

This field test was a cooperative research project which involved the Office of Economic Opportunity, the Office of Education and the Welfare Administration at the Federal level, some twenty-eight state and local education and welfare agencies, and Greenleigh Associates. Even before the project was formally undertaken on March 1, 1965, there had been a series of meetings of representatives of Greenleigh Associates, the Welfare Administration, the Office of Education, and the Office of Economic Opportunity to assure that the proposed cooperative research project and design was mutually acceptable to all concerned.

A. Responsibilities of Cooperating Agencies

To a large extent the responsibilities of each of the cooperating bodies were determined by the funding sources. For example, the funds to be used for the instructional costs of the field test were provided under Title II-B of the Economic Opportunity Act. These are administered by the Adult Education Section of the Office of Education. Thus all educational aspects of the project were the responsibility of educational agencies.

These adult basic education funds are made available to the state, and through the state to local boards of education. In order for the project to be carried out, it was necessary for the state to have an approved Title II-B plan. Each state and each local school board had to agree to the project and provide funds from the II-B money for its administration, teachers, space and equipment, and to buy the necessary instructional and testing materials.

Similarly, the supplementary funds which made it possible for the welfare recipients to attend classes were provided under Title V of the same Act and administered through the Special Services Section of the Welfare Administration. Title V funds are approved on the basis of a proposal for a work experience program for public welfare recipients prepared by a county welfare department, approved by the state agency and finally approved by the Welfare Administration. Thus in order for funds to be available to administer the welfare responsibilities of the project, recruit students, provide student costs for transportation, child care, supplementary food and clothing, and provide other services to help students remain in class, a proposed project had to be prepared, a budget developed, and approval obtained at the state and Federal levels. It was necessary to obtain approval of the project from each state department, each county welfare department, and usually, county boards of supervisors.

The Office of Economic Opportunity was responsible for providing the funds for research and for general overall supervision of the project out of Title II-A funds of the same Act.

Greenleigh Associates, the research firm, was responsible for making certain that the research design to which all parties had agreed was carried out, the data gathered, and progress and final reports prepared. However, in actual practice the research staff found it necessary to act as project coordinators. The plan had not specifically provided for any one of the cooperating organizations to take this responsibility. At the Washington level the Office of Economic Opportunity took responsibility for calling meetings of the other two cooperating agencies. However, at the state and local levels, neither the state nor local community action agencies were involved, and there was no single agency responsible for calling the cooperating parties together. Since there was a time limit on the research phase of the project, the research staff acted in the role of coordinator.

Frequently the research staff was used by the state to communicate with the Federal agencies and by counties to communicate with the state. Thus, without official authority, the research team had to assume responsibility for keeping communications open and for bringing the cooperating agencies together. There were many problems involved in assuming this role which were resolved as more experience was gained. However, it points up one of the basic problems for any cooperative research, and that is the need for a coordinating agent.

A second problem in the cooperative nature of the project was related to the different funding mechanisms under Titles II-B and V. Since each depended on a different approval method and each was for different periods, it was difficult to assure funds necessary to start the projects as soon as had been anticipated. The first classes were delayed because Title II-B funds were not available at the time the classes were scheduled to begin. Furthermore, project approvals using Title V funds have a specific beginning and ending date. If there is delay in beginning a project, it is necessary to get an amendment to the project. This is not only time consuming, but also leads to frustrations.

B. Cooperation of Federal Agencies

As has been said, before the project was formally begun, there had been a series of preparatory meetings of the three Federal agencies and Greenleigh Associates. During these preliminary meetings, the length of the class day was set at five hours and the number of weeks duration of the field test were increased from twelve to not more than twenty. It was decided that social studies and number skills should be added to the curriculum to enrich the program. It was also decided that there should be joint meetings of the three Federal agencies and the research staff to choose the reading systems to be tested, to determine which states would be invited to participate, to decide what tests would be used to measure progress, and to select arithmetic and social studies materials.

The first of these meetings was held on March 2, 1965. At this meeting it was decided that California and New York should be asked to participate. The criteria for choosing the states were that the states should:

1. Represent different parts of the United States.
2. Have strong state adult education and welfare programs with a history of cooperation.
3. Have large enough welfare recipient loads to assure the number of persons required by the research design.
4. Have a diverse population base to assure a mixture of ethnic groups, as well as urban and rural populations.
5. Have a II-B plan for adult basic education approved or ready for approval.

In order that the project might be started as quickly as possible it was agreed that the Office of Education and Welfare Administration representatives would contact their counterparts in the two states to quickly ascertain their willingness to consider the project and arrange for meetings to discuss their participation.

At the same meeting a number of reading systems which might be included in the project were discussed. It was decided that 1) only one system of a single publisher would be included, and 2) the systems to be included should represent different approaches to reading, i.e., phonics, linguistics and programmed materials.

Finally, various testing materials to be used to measure reading progress were discussed. It was agreed that the tests would be those recommended by a special committee on testing materials for MDTA programs of the Labor Department and the Office of Education. These tests were the Lorge-Thorndike Intelligence Test and the battery of Iowa Basic Skills Tests. To a large extent the expertise of the Adult Education Section of the Office of Education was relied upon in making these decisions, since they were largely educational in nature.

C. Preliminary Meetings with State Education and Welfare Departments

Following the preparatory meetings of the three Federal agencies and the Greenleigh staff, both New York and California education and welfare departments expressed interest in the project, and meetings were arranged with the states. In March 1965, meetings were held in Albany and in Sacramento.

At these meetings Dr. Roy Minnis of the Office of Education and Mr. Charles Lavin of the Welfare Administration took responsibility for explaining the funding arrangements and the educational and welfare responsibilities to their state counterparts. Greenleigh Associates representatives had responsibility for explaining the research design and how the project would be carried out. Regional office staff were also present at these meetings in order that communications between the state and Federal agencies could be maximized and to provide for ongoing consultation in relation to the project.

These meetings were attended by top representatives of both education and welfare departments and were essentially exploratory. During the meetings certain changes were made in the research design. For example, because of prior experience in New York State, it was agreed that no pencil and paper test would be used to screen students. The state adult educators reported that such tests were threatening to functionally illiterate adults and, if given, resulted in preregistration dropouts. It was agreed that the Gray's Oral Reading Paragraphs would be used for screening. Also the proposed class size was reduced from twenty to fifteen to meet state adult education standards. Similarly, California requested that reading systems being used in the state be considered for inclusion. As a result a reading system not previously considered was included in the field test.

Each state wanted to review the research design and method of analysis. Subsequent to the meeting the research design was written up in full and submitted to the research section of each of the state agencies.

While both New York and California expressed interest in the project, they raised doubts about whether they could get the project under way by June 1965 as had been planned. Even so, in each of the states the counties which might be asked to cooperate were discussed. Criteria for the selection of counties was similar to that for the selection of states:

1. A large enough public welfare recipient load to guarantee the numbers required for student and control groups.

2. Strong adult education and welfare programs with a history of cooperation.

3. A mixture of persons from various ethnic groups and urban and rural populations.

4. No prior large-scale Title V project in operation or submitted.

It was agreed that each state department in the two states would consider the project, review the amplified research design and let their Federal counterparts know if they would cooperate

By April it was apparent that although both California and New York would be included in the field test, they would not be able to start classes until September. The inability to move as quickly as had been planned included such reasons as:

1. Many of the students who should be included in classes were farm laborers and would be employed in the summer.

2. Title II-B funds were not yet available.

3. There was not sufficient state staff available to prepare and submit Title V proposals.

4. There were other new competing projects which were pre-empting staff time.

Although it was agreed that New York and California should be included at that late date, the Federal cooperating agencies decided to select a third state. After considering several alternatives, the only state which had a Title II-B plan approved at the time and was large enough to provide the required number of students was New Jersey. Therefore, a similar meeting was held in New Jersey in early May. At that meeting it was agreed that New Jersey would participate and could make the necessary arrangements to start classes in July. Camden and Passaic Counties were selected for participation.

Subsequent meetings were called of state education and welfare personnel to discuss the project with local education and welfare personnel. Interest was expressed by Camden County education and welfare personnel, and similarly by Paterson and Passaic. The approval of county boards of supervisors and boards of education was obtained. Personnel from the Welfare Administration worked closely with the state and county welfare departments in drawing up the Title V proposals. The proposal was then cleared through the Welfare Administration.

In preparation for the project a series of meetings was held in Trenton of adult education and welfare personnel with Greenleigh Associates staff. There were also meetings in each of the two counties to make plans for the project. A meeting of all casework staff was held in each county at which the project was explained by the research staff of Greenleigh Associates. Since the casework staff was responsible for identifying and referring public welfare recipients for screening, it was essential to obtain their cooperation and for them to understand the importance of the field test. This pattern was repeated in all three states.

D. Selection of Reading Systems

There were some twenty reading systems considered for the field test. At the outset, however, it became apparent that few met the criteria of the research design and those set by the cooperating agencies. The reasons for eliminating a number of systems included:

1. Some were too costly because they required expensive hardware;
2. Some did not claim to have reading materials which went through the eighth-grade level;
3. Some required extensive teacher training which would increase costs sharply;
4. Some could not be taught by untrained teachers;
5. Others had not been published by the time the classes began, and some were in process of revision;
6. A number were not oriented to the adult learner.

As a result when the classes began in New Jersey only two learning systems that met the criteria were available, and consequently only one-half of the classes were started. Two other systems were selected which would be available in September when the second half of the classes would start in New Jersey and when all classes were scheduled to begin in New York.

During much of March and April the project staff of Greenleigh Associates visited publishers to discuss reading materials to be included. It was on the basis of these discussions and information provided by the Office of Education that the four systems were selected. One publisher was reluctant to participate because they felt that other materials published by the firm might be adversely affected. However, after some period of consultation the publisher agreed to participate.

E. Selection of Supplementary Material

The selection of supplementary materials to be used in the classes proved very difficult. One arithmetic text which was considered could not be included because it had been written by one of the persons in the Federal interagency committee. Another had been published by a publisher of one of the reading systems to be tested, and it was felt this might affect the design. There were few that were suitable for adult students.

Similarly, there was no single social science text book appropriate for the adult learner with poor reading skills. The best material available was selected, but it was not considered ideal for the target population.

F. Launching the New Jersey Classes

Subsequent to the meetings, teachers were recruited by adult education personnel in each of the three cities, and they were provided training by Greenleigh Associates and the publishers of the reading systems in late July. Following the teacher training, welfare recipients were referred for educational screening, and classes began in mid-August. The starting dates for both teacher training and the classes were delayed because Title II-B funds were not available to the state until late July.

During the recruitment, the problem of male participation developed. In New Jersey there were very few men on the public assistance rolls because there is no AFDC-U program, i.e., aid to families with dependent children in which there is an unemployed parent. Because of this, special approval was given to New Jersey by the Welfare Administration to include up to seventy-five male general assistance recipients who were on city welfare rolls. This made it necessary for the county welfare departments to obtain cooperation from the city welfare departments.

Also, it was decided to reduce the number of weeks of the field test in New Jersey from twenty to seventeen. This was done to allow state education and welfare personnel to arrange for three separate but continuous work training or work experience projects over the span of a year. This plan for a continuum of work training projects including different patterns of basic education and work training was part of the Title V proposal and was included in the plan of the state adult education section. In order for the data to be comparable from state to state, the number of weeks was reduced to seventeen for all three states.

G. New York

By June, New York State education and welfare personnel had agreed to participate and begin classes in September. However, one of the counties which had expressed an interest in being included in the project withdrew. The adult education director in the city board of education which would have been responsible for the classes objected to one of the reading systems chosen for the field test. It became necessary to choose another county. One county approached would not cooperate because it could not accept the hiring of noncertificated teachers as called for in the design.

It is important to point out that each of the three states had to make an exception to their state regulations requiring certification of teachers. This was a particular problem in California where certification is required by law. Since the field test design made mandatory the employment of high school and college graduates who were not certified teachers for two-thirds of the classes, it was necessary to obtain an exception to state rules for research purposes. However, in one city in New York this exception was not acceptable.

Finally, the Oneida Welfare Department and the City of Utica Board of Education, the County Welfare Department of Onondaga and the City of Syracuse Board of Education, and the Nassau County Welfare Department and boards of education of Hempstead, Long Beach, Freeport, Glen Cove and Westbury agreed to cooperate. In one county there was some reluctance to submit a Title V proposal because an earlier one had not yet been acted upon. In each instance it was necessary to secure the approval of the county board of supervisors and the boards of education. This was a time-consuming process.

As in New Jersey, Federal staff assisted the counties in preparing the Title V proposal. Although the pattern established for New Jersey was helpful, local differences made it necessary for each county to prepare its own project proposal. As in New Jersey, approval in Washington was expedited because of the high priority enjoyed by the field test.

In New York teachers were recruited and trained in early September, and classes began near the middle of the month.

H. California

Although it had been expected that the field test in California would begin in September, classes did not begin until January 1966. There were several unique problems encountered in this state.

1. In one county the board of supervisors refused to accept the project despite interest expressed by the welfare department.

2. Another county could not accept the project because the time the classes were scheduled to begin coincided with the harvest of important crops. It was felt that the men who most needed basic education would be employed and not available.

3. Another county welfare department refused to submit a proposal for a Title V project because another had not been acted upon.

In August, Contra Costa County expressed interest in having the total California project in that county. However, because there were a number of school districts to be included it took considerable time to obtain the necessary cooperation and to make plans. The county board of supervisors was unwilling to consider the project until all of the requisite approvals from the school boards were obtained. It was not until mid-October that such aproval was obtained. Other delays were encountered, and it was decided that it was not feasible to begin the classes until after the first of the year. The reasons for further postponing the classes were:

1. The food stamp program had just been started and casework staff did not have the time in October to select the recipients who should be referred.

2. It required at least six weeks to secure approval of the civil service system to employ community aides who would act as liaison with the education personnel and help students stay in classes. Thus,staffing was not available until December.

3. It would require about two weeks to reprogram the data processing in order to provide the subsidiary public assistance allowance to pay for child care and other student costs.

4. If students were screened in December and given special allowances just prior to Christmas, it was feared that the allowance would be dissipated during the holiday.

Teacher recruitment and training took place in early December, and student screening took place during the remainder of the month.

I. Problems Common to All States

In each of the states there were problems encountered once the decision to undertake the project had been made and plans laid. However, one of the anticipated problems did not arise except in one county. It had been feared that it would be difficult to recruit teachers; except for Passaic County, New Jersey, this proved not to be the case. However, student recruitment was difficult in all counties except Oneida County, New York. This problem is dealt with more fully in Chapter IV.

In getting the project under way there was some lag in providing the extra money required for child care and other student costs. This was because classes began soon after students had been screened and there was not sufficient time for county welfare departments to reschedule their accounting procedures for these cases. When such allowances were delayed, attendance was markedly affected.

Almost without exception the acquisition of sites for the classes was a problem. The major exception was Syracuse, New York which has a school for adult education that could accommodate all eight classes involved in the field test. In other communities churches, temples, community centers, store fronts and YMCA's or YWCA's were found for the classes. However, this took considerable time and effort. In some communities like Nassau County, New York and Richmond, California the rentals were high. Some of the sites were excellent, but some had heating, lighting, ventilation, and sanitary problems which affected class morale. At least one site was too small to allow class grouping. It is clear that one problem in establishing daytime classes for adult students is locating good sites. Even if school rooms are available, if there are children in the school, adults are uncomfortable.

In California the choice of a church with good facilities included a bonus. The women of the church, who had a weekly luncheon, prepared an inexpensive meal one day a week for the students. The women of this church also prepared coffee and did much to make the students feel at home. This was a good experience for the students and the church.

In one state there was a problem of paying the teachers on time, and for several weeks they went without salary. This was due to a disagreement between the state adult education personnel and the local school board about what could be charged to the project.

In every state the distribution and storage of books, materials, and other classroom supplies was a problem in most communities.

Attendance was also affected on the days regular welfare checks were expected in the mail. Students feared that mail boxes would be rifled and the checks stolen. This problem had been identified by personnel in New York on the basis of previous experience. Likewise, on days when surplus commodities were made available, attendance was affected in some communities.

Child care arrangements were difficult to make, transportation posed a problem in the more suburban and rural areas, student and child illnesses increased as the weather became more inclement, and in every state a number of persons scheduled to begin classes decided to drop out before classes began.

Despite these problems, most persons who attended classes for at least a week continued for the entire seventeen weeks. The morale of both teachers and students remained high until near the end of the field test. Then, uncertainty about the future of the program affected both teachers and students.

In New York and New Jersey there was doubt that there would be Title II-B funds available to continue the classes or any education-work training program after the field test. Only about 15 percent of the students had reached the eighth grade level; those who hadn't, wanted to continue their education. Newspapers carried stories that Title II-B funds had been cut in half and that classes would be discontinued. Faced with this possibility, students in several counties asked if they could write letters to the President, Mr. Shriver, their congressmen and senators. This they were permitted to do as part of their educational experience. Whether as a result of these letters--or other pressures--the funds were reinstated.

In California a similar uncertainty arose because Title II-B funds ran out June 30. The students wanted to be assured that classes would be continued, but the state could not promise funds. Like their peers in New York and New Jersey they wrote letters to Washington and their congressmen. Much to the delight of the students the letters to the President were answered.

In all three states the students learned they could take action and have response from their government. This was a new and exciting experience.

IV. CHARACTERISTICS OF THE STUDENTS

According to the research design the students to be recruited were to be public welfare recipients. This group was chosen because other studies had shown that there was a relatively large number of functionally illiterate adults among this population. Furthermore, public welfare is the only establishment with continuous contact with large numbers of the poverty population. In addition, the field test was considered important to the Welfare Administration for future policy and program decisions. Finally, it had the only source of funds which could defray the student supplementary costs. Since the classes were five days a week for five hours, the costs of attending were not inconsequential. Thus, through Title V funds, the extra costs of food, clothing, transportation and child care could be met. An extra welfare allowance was made available to each student to defray these costs. In California, where there is a ceiling on welfare grants for large families, the normal welfare grant was also increased because, by regulation, full budgetary need must be met for persons in Title V programs.

Although most Title V participants are only those who are considered employable, for purpose of the field test any functionally illiterate adult was eligible. It was recognized that basic education would be useful in the future for helping mothers and their children.

Any public welfare recipient who had reading skills below fifth-grade level was eligible. However, AFDC recipients were considered the main target group. An exception was made by the Welfare Administration for research purposes to include, in California, up to 125 single males not eligible for public assistance, and in New Jersey seventy-five men from the general assistance rolls, as explained previously. Students could be no younger than eighteen and, although acceptable, less emphasis was placed on recruiting those fifty-five years of age or older.

According to the plan, all students identified by the casework staff as being functionally illiterate were to be referred for vision and hearing tests. These were simple tests intended to screen out those students with obvious defects for referral to physicians. If the defect were correctible, glasses and hearing aids were to be provided and paid for from Title V funds.

The screening was done in all participating counties, but correcting defects was a major problem in all. In most states it was not easy to arrange for doctors' appointments expeditiously. In addition, students frequently failed to keep appointments once they were made. As a result many who had defects attended classes without glasses or hearing aids. Others were not placed in classes, especially those with severe hearing defects. In some counties, because of the pressure of time, vision and hearing screening followed the educational screening.

Even if physical screening had run smoothly, recruitment was still a problem in all but one of the counties.

A. Selection and Recruitment

In all counties the regular casework staff carried responsibility for identifying and referring the prospective students for educational screening. In Camden, Syracuse and Utica the screening was done in one central place. However, where more than one city was involved, screening was carried on in several locations simultaneously. The teachers who had been through the training program and the research staff were responsible for the educational screening process. The welfare department was responsible for scheduling a prearranged number of persons for screening at given hours during the screening days. Although many appeared at the appointed time, only in one locality were there sufficient numbers to screen on the appointed days. Because of this, in most counties a letter was sent to all welfare recipients explaining the project and asking if they would be interested in participating. This method coupled with the continued efforts of the casework staff proved effective in getting the necessary numbers of students in all but one county. However, in most of the localities this necessitated screening for most of the month after classes began in order to obtain sufficient numbers or replacement of dropouts.

According to the project design, students could be added to classes during the first twenty days. The countinuing screening process made it possible to fill all classes by the time classes were closed, except in one county. However, in order to fill classes, all those who had been selected for the control group were placed in classes, except in New Jersey and Utica, New York.

The plan provided for a control group of 125 in each state. These persons were to be given the Gray's Oral Reading Paragraphs Test at the beginning and end of the field test, and their gain scores were to be compared with the gain scores of the participant students. Because of the problem of recruiting students, the control group had to be abandoned except for sixty-one in New Jersey and sixteen in Utica, New York.

It is important to bear in mind that recruitment of this population is a problem for a number of reasons:

1. It is difficult for an adult to admit he is functionally illiterate.

2. Many welfare recipients as well as other adults in poverty lead relatively isolated lives. The idea of going to school creates fears of the unknown. It is difficult to alter human patterns.

3. Leaving children in the care of other persons presents many problems. Making satisfactory arrangements for children is difficult--at times impossible.

4. Casework staff are already overburdened with other tasks and often resist added responsibility. Furthermore, case records are not explicit about the literacy level of recipients. To recruit takes time and effort and means that other work falls behind. To persuade an adult to try a new experience also requires skill. Even with the highest degree of cooperative effort on the part of casework staff, recruitment is difficult and time consuming.

From the experience in the field test it is apparent that time, planning and training are necessary in order initially to recruit adults. However, satisfied students frequently recruit their friends. In at least one county friends of students were clamoring for new classes to be set up for them. For continuing programs, persons who have been in classes might be used to recruit others.

The amount of prescreening by casework staff varied from county to county. For example, in one county only one out of every three referred for educational screening read below the fifth-grade level. In another county almost nine out of every ten met the criteria of less than fifth-grade reading. However, in the first county all classes were filled, but not in the second. Whether prescreening was too strict in this county cannot be determined.

B. Services

In both New Jersey and New York persons who had been caseworkers or met the criteria for caseworkers were employed to provide services to the students which would assist them in staying in school. This staff was responsible for following up on absentees, helping make arrangements for child care and transportation, assisting students in making physicians' appointments which would not interfere with attendance and, if practical, taking a child to the clinic while the parent attended class. Such back-up services were found to be essential. In addition, the casework counselor was responsible for making plans for a continuing work and education program at the conclusion of the field test. In every community most of the students were offered continued classes in basic education, given work training or a job. The pattern, however, varied markedly from community to community.

These casework counselors were the link between education and welfare. It is important to note that at the outset of the program these counselors, as they were called to differentiate them from the casework staff, were most successful if they had been on the welfare staff before reassignment. In those counties where new persons were employed and given the assignment, services to students were more spotty. The new workers were faced with the problems of a new job, learning the county, and learning how to get information needed to help them carry out the service aspects of their assignment. This seems to indicate that planning for such services and training staff to carry out the services is essential if they are to be provided. However, new staff did learn how to do the job as the project progressed, and they performed admirably.

In California, the persons selected to provide these services with the assistance of the ongoing caseworker were community aides. The new case aides were all former AFDC mothers who had had eight months of work experience training. They were given training in their new responsibilities and--very important--civil service ratings as community aide trainees.

These community aides were also used to assist in recruiting students. One of them reported the following story, illustrative of the time and ingenuity recruitment takes:

> I went to see Mrs. Y. and she was ironing. She told me she didn't want to go to school. I sat down and talked to her while she ironed. After awhile I said 'go get your hat. We are going downtown to have you take the tests.' Mrs. Y. put down the iron and came with me. By the time we got downtown she was glad she had come.

These community aides were successful adjuncts to the educational process. Although not a finding of the field test per se, it is important to point out that this opportunity was very meaningful to these women. Two were still eligible for supplementary public assistance because of the size of their families. However, both refused such aid because they wanted to be wholly independent.

If these nine women alone are successful and work for only six years they will have paid for the total educational costs and more incurred during the field test in terms of welfare benefits saved.

C. The Screening Process

Students at the educational screening sessions were given three tests. The research staff of Greenleigh Associates explained the project to those referred in groups of ten to thirty and administered the Bender-Gestalt Test to the group. The purpose of this test was to screen out those with severe perceptual and motor problems.

Following the Bender-Gestalt Test the teachers administered the Gray's Oral Reading Paragraphs and the forty-word Wechsler vocabulary test on an individual basis. After the screening was finished, those reading at below the fifth-grade level were identified and placed in classes on a random basis. However, in order to assure that each class would be balanced according to sex, age and ethnic background, the class assignments were randomly stratified. Once class assignments had been made they were reviewed to determine whether a particular assignment would create transportation problems for the student. If this was the case, a student with similar characteristics was substituted for another. This method resulted in fairly well-balanced classes by system and level of teacher. (See Appendix A.)

The following are summaries of the number referred, screened and assigned to classes by state and locality.

Table 1

Department of Welfare Screening of Students
for Visual and Hearing Difficulties, New Jersey

Cases	Total	County Camden	 Passaic
Total family caseload	4127	2327	1800
Number referred for vision and hearing screening	601	342	259
Not qualified because of failing vision and hearing test	36	36	0
Needing visual correction	93	83	10
Glasses provided	27	21	6
Needing hearing correction	94	63	31
Hearing correction provided	38	27	11
Number referred for educational screening	3529	2391[a/]	1138

a/ Includes persons from other than family cases; these were eligible for literacy classes although family cases were the target group.

Source: Welfare department

As can be readily seen, only about one-sixth of those referred for educational screening were also referred for vision and hearing tests in New Jersey. This was largely due to the pressure to get classes started. If educational screening had followed the vision and hearing tests in every case, the beginning of classes would have been delayed for a number of weeks. In New Jersey the county welfare departments cannot purchase medical services which can be obtained free. The free services are not always readily available. Neither hospitals nor pools of doctors are available to provide services quickly to large numbers of persons. Even if the services could have been purchased, it is doubtful that the numbers would have been accommodated in the time allotted. It is also significant that in both New Jersey and California, roughly 10 percent of those referred for vision and hearing tests were eliminated from further screening because they had "failed" the vision and hearing tests.

Unlike New Jersey, all persons in New York identified as needing glasses or hearing aids received them. However, a number began classes before such aids were made available. In New York, with the exception of Onondaga County, the casework staff prescreened those referred for classes very carefully. Almost all were eligible in terms of reading level.

Table 2

Department of Welfare Screening of Students for Visual and Hearing Difficulties, New York

	County		
Cases	Nassau	Onondaga	Oneida
Total family caseload	9,000	5,250	3,100
Number referred for vision and hearing screening	790	150	182
Needing visual correction	73	54	12
Glasses provided	73	54	12
Needing hearing correction	5	-	1
Hearing correction provided	1	-	1
Number referred for educational screening	448	250	119

Source: Welfare department

Note: Numbers and percentages of "no answers" are excluded from tables and text throughout report, except when significant. Percentages may not add to 100 percent and numbers may not equal totals because of use of electronic data processing, rounding, exclusion of "no answer" or because of multiple responses to items which were not mutually exclusive.

California fell between the two extremes as can be seen in the following table. The distances in Contra Costa County, the lack of public transportation facilities, and the difficulty in mobilizing medical resources resulted in less than total attention to vision and hearing problems.

Table 3

Department of Welfare Screening of Students
for Visual and Hearing Difficulties, California

Cases	Contra Costa County
Total family caseload	13,655
Number referred for vision and hearing screening	915
Cases not qualified because of failing vision and hearing test	99
Needing visual correction	254
Glasses provided	133
Needing hearing correction	56
Hearing correction provided	0
Number referred for educational screening	816

Source: Welfare department

D. Student Characteristics

In each county the caseworker counsellors assigned to the project were asked to fill out a form providing the basic characteristics of all students assigned to the classes. There were 1,815 student characteristics forms submitted:

... 662 in New Jersey
... 552 in New York
... 601 in California

The findings are summarized in the following sections.

1. Race, Sex, Age and Public Assistance Status

It can be seen that the racial composition of the student population was different in each state. For example, almost 75 percent of the students in

New York and 69 percent in New Jersey were Negro, while in California only 45 percent were Negro. (See Table 4.)

In California over 30 percent of the students were white, compared with 13 percent in New York and 11 percent in New Jersey. These variations in percentages probably reflect the differences in the welfare populations in the localities from which students were drawn.

New York had fewer Spanish-Americans (11 percent) than did either New Jersey or California. New Jersey and California had approximately the same proportion of Spanish-Americans, 20 percent and 18 percent respectively. However, the term "Spanish-American" refers to different populations in the eastern states than in California. In New York and New Jersey "Spanish-American" usually referred to Puerto Ricans, while in California it usually designated those of Mexican origin.

The proportions of male and female students differed tremendously from state to state. In New Jersey there was no AFDC-U program, and because of this few males were eligible for the field test. The few males that did participate in New Jersey were from the general assistance rolls. Thus, in New Jersey only 9 percent of the students were men, in New York 22 percent, and in California 42 percent.

There were differences among the three states with regard to age. In New Jersey 36 percent of the students were less than thirty years old, while in New York this was 20 percent, and in California 28 percent. In New York and California 40 percent of the students were forty years of age or older, while in New Jersey less than 30 percent were in this group.

Table 4

Population Characteristics of all Students
Assigned to Classes (in percents)

	States		
Characteristics	New Jersey	New York	California
Number of students	662	552	601
Total percentage	100	100	100
I. Race			
White	11	13	31[a]
Negro	69	74	45
Spanish-American	20	11	18
II. Sex			
Male	9	22	42
Female	91	78	58
III. Age			
20 years or younger	5	2	6
21-29 years old	31	18	22
30-39 years old	37	39	30
40 years or older	27	40	41

[a] Remaining percentage consisted of Orientals, Indians, others, etc.

Roughly three-fourths of the participants in all states had been receiving assistance for two years or more prior to being assigned to the classes. This was used as the break point because a change in AFDC in New Jersey made it difficult to determine length of dependency prior to 1963. As can be seen in Table 5, the majority of students in all three states were AFDC recepients:

Table 5

Public Assistance Status of all Students
Assigned to Classes (in percents)

Status	States		
	New Jersey	New York	California
Number of students	662	552	601
Total percentage	100	100	100
Receiving public assistance	100	97	97
Type of assistance[a]			
APTD	1	5	9
AFDC	90	72	51
AFDC-U	-	4	23
GA	7	15	10
Receiving public assistance two years or more	80	71	69

[a] APTD--Aid to Permanently and Totally Disabled
AFDC--Aid to Families with Dependent Children
AFDC-U--Aid to Families with Dependent Children with Unemployed Parent
GA --General Assistance

2. Employment History

The great majority of students (1,505) had been employed at some time prior to being selected for the field test program. The following percentages indicate those who had held jobs at some time:

... 80 percent in New Jersey
... 92 percent in New York
... 78 percent in California

As can be seen by the fact that the percentages following the job classifications in Table 6 add to more than 100 percent, some of those who worked held more than one type of job. However, about 90 percent of those who had been employed were either unskilled or semiskilled laborers, or service workers.

Table 6

Types of Jobs of Those Ever Employed (in percents)

Job Category	Total	States New Jersey	New York	California
Total number of students	1815	662	552	601
Number employed	1505	532	507	466
Percent employed	100	100	100	100
Professional	1	-	1	1
Managers	-	-	1	-
Clerical/sales	4	5	4	2
Craftsmen	5	1	5	9
Unskilled or semiskilled factory workers	37	48	32	30
Service workers	56	56	74	36
Farm labor	12	8	12	18
Other labor	15	3	13	30

3. Residence and Place of Birth

In all three states the data on residence strongly indicate that the overwhelming majority were not members of a shifting population, moving from place to place and seeking aid from a community to which they had recently moved. Over 80 percent of the students had lived in the same state for five years or more, over 50 percent ten years or more.

In all three states a high proportion of students were born in the southern United States. The percentages ranged from a low of 47 percent in New Jersey to a high of 72 percent in New York.

Table 7

Geographic Characteristics of All Students
Assigned to Classes (in percents)

Characteristics	States		
	New Jersey	New York	California
Number of students	662	552	601
Total percentage	100	100	100
I. Length of residence in state			
Five years or more	84	80	85
Ten years or more	61	56	73
II. Birthplace			
Present state	21	5	10
Puerto Rico	20	10	1
Mexico	-	-	11
Southern, USA	47	72	59
Northeastern, USA (excluding present state)	10	7	2
Western, USA (excluding California)	-	-	10

4. Family Characteristics

New Jersey had the highest percentage of the students with children (98 percent), the lowest proportion of married students living with spouse (15 percent) and the largest number of persons per household. On the other hand, California reported the lowest proportion of students with children (77 percent), the highest percentage of students married and living with spouse (47 percent) and the smallest number of persons per household. This was probably due to the difference in the proportion of men in the California student population compared with New Jersey and New York.

Table 8

Family Characteristics of All Students Assigned to Classes (in percents)

Characteristics	States		
	New Jersey	New York	California
Number of students	662	552	601
Total percentage	100	100	100
Single, never married	25	25	13
Married, living with spouse	15	33	47
Separated	37	23	23
Deserted	12	5	-
Widowed	5	8	5
Divorced	4	5	9
Students with children	98	81	77

The numbers of persons per household in students' households were larger than those reported in the 1960 Census for the general population in same geographical areas:

... 4.8 persons per student household and
3.3 in the general population in New Jersey

... 4.2 persons per student household and
3.1 in the general population in New York

... 4.1 persons per student household and
3.0 in the general population in California

Of the 1,815 students for whom characteristics forms were returned, 1,554 or 86 percent had children. The proportion of students with children varied from state to state:

... 98 percent of students in New Jersey had children
... 81 percent of students in New York had children
... 77 percent of students in California had children

The 1,554 students had a total of 5,733 children, of whom almost 2,000 were age five or younger. For those students with children, the average number of children was 3.69, with little variation from state to state.

5. Educational Background

The educational background of students varied by state. For example, the proportion of those with a fifth-grade education or less was almost 30 percent in New Jersey, over 40 percent in New York, and almost 50 percent in California. The most surprising fact was the number who were reported to have completed ninth grade or higher, roughly 30 percent in New Jersey and 21 percent in California.

Over 80 percent of the students in New York and New Jersey had not been in school for more than ten years, some for a great many more years. In California this figure was almost 70 percent.

Table 9

Educational Characteristics of All Students
Assigned to Classes (in percents)

Characteristics	States		
	New Jersey	New York	California
Number of students	662	552	601
Total percentage	100	100	100
Out of school ten years or more	80	86	67
Fifth-grade education or less	29	44	47
Eighth-grade education or less	70	85	77
Ninth-grade education or higher	29	14	21

E. Students' Intelligence Quotient

Two tests were used to measure the intelligence quotients of the student population: 1) the Wechsler Vocabulary Test and the Lorge-Thorndike Intelligence Test. However, it is important to note that neither of these tests has been standardized for this population. Furthermore, for non-English speaking students, the tests have no pertinence. With these caveats in mind the results of these two tests are presented in Tables 10 through 15.

It is obvious that the Wechsler Test provides a much higher score. It is equally obvious that the means of the tests by class are highly consistent from state to state and by level of teacher and reading system. Although a few students scored over 100 on each test (range of scores: 45 - 123), on the basis of the achievement of the students it seems apparent that the actual intelligence of the students was grossly understated.

Table 10

Mean Tentative Verbal I.Q. Scores (WAIS Vocabulary List) by System and Level of Teacher, New Jersey[1/]

Level of Teacher	Total	Basic Education Systems I	II	III	IV
Total	82	81	81	83	83
H.S. Grad.		81	81	83	85
Coll. Grad.		80	80	86	85
Cert.		83	82	81	81

N=611

Table 11

Mean Tentative Verbal I.Q. Scores (WAIS Vocabulary List) by System and Level of Teacher, New York

Level of Teacher	Total	Basic Education Systems I	II	III	IV
Total	80	80	80	82	80
H.S. Grad.		81	79	83	80
Coll. Grad.		80	77	82	80
Cert.		79	83	80	82

N=557

Table 12

Mean Tentative Verbal I.Q. Scores (WAIS Vocabulary List) by System and Level of Teacher, California

Level of Teacher	Total	Basic Education Systems I	II	III	IV
Total	86	84	87	87	84
H.S. Grad.		82	88	86	81
Coll. Grad.		85	87	88	84
Cert.		85	87	87	86

N=566

[1/] The systems throughout this report will be designated as I, II, III, and IV. The key is: I, AIR; II, SRA; III, Mott; and IV, Follett.

Table 13

Lorge-Thorndike Mean Scores, New Jersey

Level of Teacher	Total	Basic Education Systems I	II	III	IV
Total	65	64	65	65	66
H.S. Grad.		66	63	67	68
Coll. Grad.		64	62	67	67
Cert.		64	69	63	62

N=404

Table 14

Lorge-Thorndike Mean Scores, New York

Level of Teacher	Total	Basic Education Systems I	II	III	IV
Total	61	61	62	62	61
H.S. Grad.		62	60	62	61
Coll. Grad.		60	61	60	60
Cert.		61	64	63	62

N=411

Table 15

Lorge-Thorndike Mean Scores, California

Level of Teacher	Total	Basic Education Systems I	II	III	IV
Total	63	63	64	62	62
H.S. Grad.		60	64	66	61
Coll. Grad.		65	63	60	63
Cert.		63	65	61	61

N=452

F. Student Attendance and Dropouts

Over all, the attendance rate of students was roughly 75 to 80 percent over the seventeen-week period. This varied only slightly by reading system and level of teacher. In fact, where variation occurs in one state it is almost invariably different in another state, indicating that neither reading system nor level of teacher was the operating factor affecting attendance.

The same is true for dropouts. There were dropouts in each of the reading systems. However, these do not form any pattern. There were two types of dropouts which need to be distinguished: 1) those who were assigned to classes and either never attended a single day or attended less than one week, and 2) those who attended more than a week. It was not until the end of the first week that classes could be considered to have been operating fully. Confusion over place, arranging child care and transportation, and the inability of casework counselors to follow up quickly on all students having problems caused some problems to be unresolved until a week had elapsed. For this reason, dropouts during the first week were more like those who never attended than those who continued to attend.

1. Dropouts

If the first group of dropouts is excluded, no pattern can be discerned between reading systems. The following table points this out.

Table 16

Percent of Dropouts by System and State

	Total	New Jersey	New York	California
System I	21	17	20	25
System II	18	17	14	24
System III	22	31	18	17
System IV	21	24	6	31

Although in New Jersey the largest numbers of dropouts were in Systems III and IV, in New York System IV had by far the smallest percent of dropouts, and in California System IV had the most dropouts.

When all dropouts are considered, both those who attended for a week or more and those who did not attend or attended for less than a week, there were: 282 in New Jersey, 174 in New York and 211 in California. Although it cannot be substantiated by any data, it is likely that the most important factor in helping people come to and stay in classes initially was the ability of the welfare department to interpret the program, solve child care and transportation problems and follow up on dropouts.

In a few cases students were asked to leave the classes because of persistent unsocial behavior, but this was rare.

In order to ascertain the reasons for dropout of both groups, the casework counselors conducted an exit interview with all dropouts who could be located. Of those who never attended, a substantial number could not be found for the interview. Based on those interviews, the reasons given for dropout are numerous. These can be seen in Table 17.

Table 17

Reasons for Dropout

	Total	New Jersey	New York	California
Took a job	64	12	15	37
Illness of student	138	40	51	47
Illness in family	30	6	16	8
Child care problems	70	25	30	15
Pregnancy	15	5	8	2
Moved	31	3	10	18
Loss of interest	156	80	36	40
Never ascertained	75	60	9	6
Other, including no transportation	72	10	19	43

The majority who lost interest, took jobs, or for whom no information was obtained were those who dropped out before classes began or during the first few days of the classes. Dropouts after classes began were due primarily to illness and child care problems. Transportation was a problem in counties like Nassau in New York and eastern Contra Costa in California. These are suburban and rural counties in which public transportation is poor or nonexistent. This kind of community presents particular problems in establishing adult basic education classes.

Weather was also a factor. The difference in dropout rates between Systems I, II, III and IV in New Jersey were probably due to difference in time. The first two systems were completed before the worst weather set in, and the last two went into winter months. In upstate New York, classes had to be suspended for a week because of heavy snows. During the winter in both New York and New Jersey illness of students and their children increased.

It is important to note that the research staff observing the classes were impressed by the number of illnesses the students had. Furthermore, even a slight illness like a headache was frightening to many, beyond the fear that persons of a different socio-economic group would have. At the same time illnesses were often real. It is significant that sixteen persons in New Jersey who completed the seventeen weeks were too ill to be placed in a combination education and work training program. The physical examination uncovered heart ailments and similar physical problems which made it impossible for these persons to undertake work training.

Tables 18 through 20 show the comparative data on all dropouts between the three states by system. As can be seen there is no consistent pattern by system from state to state. For further detail on dropouts and replacements see Appendix B.

Table 18

General Attendance and Dropout Data by System, Entire 17 Weeks, New Jersey

		Basic Education Systems			
	Total	I	II	III	IV
Total assignment	685	148	158	194	185
Number never attended	125	12	16	52	45
Number attended less than five days	41	4	11	9	17
Number attended more than five days	519	132	131	133	123
Of those attending more than five days, number of dropouts	116	23	22	41	30
Of those attending more than five days, percent of dropouts	22	17	17	31	24

Table 19

General Attendance and Dropout Data by System, Entire 17 Weeks, New York

	Total	Basic Education Systems I	II	III	IV
Total assignment	585	150	153	137	145
Number never attended	92	24	23	20	25
Number attended less than five days	11	4	5	1	1
Number attended more than five days	482	122	125	116	119
Of those attending more than five days, number of dropouts	71	25	18	21	7
Of those attending more than five days, percent of dropouts	15	20	14	18	6

Table 20

General Attendance and Dropout Data by System, Entire 17 Weeks, California

	Total	Basic Education Systems I	II	III	IV
Total assignment	603	144	157	148	154
Number never attended	57	13	20	11	13
Number attended less than five days	27	8	8	4	7
Number attended more than five days	519	123	129	133	134
Of those attending 75 days, number of dropouts	127	31	31	23	42
Of those attending 75 days, percent of dropouts	25	25	24	17	31

The data by level of teacher is similar for all three states, and all data points clearly to the fact that neither level of teacher nor system affected the dropout rate. Dropout was due to factors outside the classroom.

2. Attendance

Similarly, factors affecting attendance were neither reading system nor level of teacher. This is clearly evident in the following data.

Table 21

Students Completing Program,

Average Percent of Attendance, Entire 17 Weeks, by State

	N. J.	N. Y.	Calif.
System I	89	76	79
System II	81	75	75
System III	81	70	78
System IV	83	73	80
H.S. Graduate	82	72	81
College Graduate	82	73	74
Certified Teacher	82	74	79

The most frequent reasons for failure to attend were illness, failure of child care arrangements, doctors' appointments, school or other problems of children, breakdown in transportation arrangements, and similar problems. Some poor attendance could be traced to incipient alcoholism, but this was uncommon.

Particularly in urban areas, attendance was affected adversely on those days when welfare checks were expected in the mail. Students were fearful that if no one was home when the mailman arrived the check would be stolen. This is a common problem of recipients of monies through the mail at regular intervals. In one county arrangements were made to hand deliver the checks to the students attending classes.

V. READING GAINS

As has been stated, the purpose of this field test was "to evaluate the effectiveness of selected learning systems...with economically dependent adults." The students were selected from the public welfare rolls and were all functionally illiterate adults. The functionally illiterate adult was defined as any person eighteen years of age or older reading at a 4.9 grade level or below. As explained earlier the reading level was determined by administering during screening sessions the Gray's Oral Reading Paragraphs test to all public assistance recipients referred by the casework staff of the county welfare departments participating in the field test.

In analyzing the achievement of the some 2,000 persons who were assigned to classes, several different sources of information were used. However, the basic tools were gain scores in reading achievement as measured by Gray's Oral Paragraphs and Iowa Basic Skills tests. These gain scores were analyzed by reading system, level of teacher, and by age, race, sex and ethnic origin of the students.

A. Student Scores

As was stated, to qualify for the field test classes students must have been reading below the fifth-grade level as determined by the Gray's Oral Reading Paragraphs test. The actual mean reading level of students at entry as measured by the test were:

...3.049 grade level in New Jersey
...2.786 grade level in New York
...2.702 grade level in California

The first Iowa scores on reading level were similar:

...3.31 grade level in New Jersey
...2.66 grade level in New York
...3.02 grade level in California

Thus, it is evident that the target population was obtained as far as it can be determined by testing methods available.

Likewise the students' initial reading level was fairly equally distributed among the classes by reading system and level of teacher, as can be seen in the following three tables.

Table 22

Initial Gray's Oral Means by System and Level of Teacher, New Jersey

Level of Teacher	Total	Basic Education Systems I	II	III	IV
Total	3.049	2.989	2.962	3.074	3.145
H.S. Grad.	3.105	2.963	3.022	3.125	3.249
Coll. Grad.	2.885	2.841	2.683	2.962	2.940
Cert.	3.178	3.173	3.185	3.127	3.229

N=679

Table 23

Initial Gray's Oral Means by System and Level of Teacher, New York

Level of Teacher	Total	Basic Education Systems I	II	III	IV
Total	2.786	2.824	2.703	2.868	2.751
H.S. Grad.	2.751	2.818	2.638	3.030	2.536
Coll. Grad.	2.645	2.734	2.656	2.672	2.515
Cert.	2.971	2.918	2.843	2.909	3.190

N=574

Table 24

Initial Gray's Oral Means by System and Level of Teacher, California

Level of Teacher	Total	Basic Education Systems I	II	III	IV
Total	2.702	2.744	2.932	2.635	2.494
H.S. Grad.	2.799	2.663	3.223	2.888	2.398
Coll. Grad.	2.609	2.711	2.716	2.440	2.553
Cert.	2.695	2.849	2.855	2.563	2.533

N=601

The final Gray's scores for the three states were:

...5.326 grade level in New Jersey
...4.405 grade level in New York
...4.642 grade level in California

And the average gain by state as measured by the Gray's scores was:

...2.160 grade level in New Jersey
...1.509 grade level in New York
...1.844 grade level in California

Thus, on an average, students progressed between 1.5 grades and two grades in the three states. Final and gain scores by system and level of teacher are presented in Tables 25 through 30. Since a high correlation was found to exist between Gray's scores and Iowa scores, only the former are presented in detail.

Table 25

Final Gray's Oral Means
by System and Level of Teacher, New Jersey

Level of Teacher	Total	Basic Education Systems I	II	III	IV
Total	5.326	5.505	5.465	5.073	5.205
H.S. Grad.		5.245	4.531	5.187	5.006
Coll. Grad.		5.763	5.785	5.293	5.194
Cert.		5.479	6.297	4.704	5.328

N=364

Table 26

Final Gray's Oral Means
by System and Level of Teacher, New York

Level of Teacher	Total	Basic Education Systems I	II	III	IV
Total	4.405	4.014	4.091	4.823	4.671
H.S. Grad.		3.675	3.948	5.556	3.991
Coll. Grad.		3.984	3.685	3.697	4.306
Cert.		4.436	4.617	5.274	5.657

N=369

Table 27

Final Gray's Oral Means
by System and Level of Teacher, California

Level of Teacher	Total	Basic Education Systems			
		I	II	III	IV
Total	4.642	4.838	4.877	4.424	4.492
H.S. Grad.		4.485	5.628	4.816	4.729
Coll. Grad.		4.083	4.813	4.085	3.881
Cert.		5.800	4.235	4.394	4.807

N =346

Table 28

Gray's Oral Mean Change, Initial and
Final Test Scores, New Jersey

Level of Teacher	Total	Basic Education Systems			
		I	II	III	IV
Total	2.160	2.334	2.359	2.051	1.829
H.S. Grad.		2.081	1.553	2.263	1.061
Coll. Grad.		2.726	2.904	2.129	1.988
Cert.		2.179	2.837	1.723	2.097

N=364

Table 29

Gray's Oral Mean Change, Initial and
Final Test Scores, New York

Level of Teacher	Total	Basic Education Systems			
		I	II	III	IV
Total	1.509	1.121	1.266	1.781	1.838
H.S. Grad.		0.772	1.364	2.211	1.348
Coll. Grad.		1.103	0.704	1.187	1.852
Cert.		1.539	1.659	1.981	2.286

N=369

Table 30

Gray's Oral Mean Change, Initial and Final Test Scores, California

Level of Teacher	Total	Basic Education Systems I	II	III	IV
Total	1.844	2.067	1.914	1.656	1.792
H.S. Grad.		1.878	2.312	1.816	2.300
Coll. Grad.		1.148	1.813	1.597	1.108
Cert.		3.004	1.658	1.569	1.867

N=346

At the final testing using the Gray's scores as a base, 122 students in New Jersey, seventy-six in New York, and eighty-seven in California scored at the sixth-grade level or above. The numbers of persons who attained eighth grade or above were seventy-seven in New Jersey, twenty-five in New York, and thirty-eight in California. These were approximately the same by system and level of teacher for the total participant group and within each state. These data are set out in Tables 31 and 32. Note that on this basis, differences in initial level are not taken into account.

Table 31

Comparison of Students Completing Field Test Program Who Scored 6.0 or Higher on Final Gray's Oral Test, by State

System and Level of Teacher	Total	New Jersey	New York	California
Number of students completing	1,093	375	371	347
Number scoring 6.0 or higher	285	122	76	87
Percent of completing students scoring 6.0 or higher	26	33	21	25
		(in percents)		
System I	26	33	15	30
System II	27	37	17	27
System III	25	29	27	21
System IV	25	29	23	24
H.S. Grad. teachers	26	30	19	28
Coll. Grad. teachers	25	38	18	18
Cert. teachers	28	29	24	29

Table 32

Comparison of Students Completing Field Test Program Who Scored 8.0 or Higher on Final Gray's Oral Test, by State

System and Level of Teacher	Total	New Jersey	New York	California
Number of students completing	1,093	375	371	347
Number scoring 8.0 or higher	140	77	25	38
Percent of completing students scoring 8.0 or higher	13	21	7	11
		(in percents)		
System I	13	24	2	11
System II	15	27	5	11
System III	11	16	9	8
System IV	13	13	11	14
H.S. Grad. teachers	12	15	6	14
Coll. Grad. teachers	11	24	3	5
Cert. teachers	16	22	11	14

Table 33

Change Scores from Test to Test, Iowa Reading Comprehension, by State

Grade Level and State	Total	Basic Education Systems I	II	III	IV
New Jersey					
Grade 3 to grade 4	.421	.478	.352	.502	.346
Grade 4 to grade 5	.452	.561	.544	.322	.303
Grade 5 to grade 6	.092	.048	.265	.091-	.210
New York					
Grade 3 to grade 4	.344	.188	.462	.363	.383
Grade 4 to grade 5	.567	.668	.592	.500	.511
Grade 5 to grade 6	.458	.466	.492	.348	.523
California					
Grade 3 to grade 4	.447	.047	.447	.653	.534
Grade 4 to grade 5	.408	.411	.141	.343	.702
Grade 5 to grade 6	.380	.551	.583	.360	.081

In order to ascertain which of the systems could teach the functionally illiterate to read in the shortest possible time, the mean gains from test period to test period were examined. The gain scores by testing period are presented in Table 33. As can be seen, there is no consistent pattern from state to state by system. In other words, when the most progress in one state in one system occurred in a certain period it did not necessarily follow that the pattern was the same in another state.

In addition to examining mean differences in gain between the systems and levels of teacher preparation, differences were examined on the basis of individual progress. For those students who showed the least and the most gain, it was found that no statistically significant differences existed either by reading system or level of teacher. In other words, those students who made the most and least progress were found in basically the same proportions in each of the four systems and in each of the three teacher levels.

Change scores of two groups of persons making the most and the least progress were studied in relationship to the individual's initial reading level. Of those who made the most progress, 66 percent of the group was reading at 3.1 or above on the initial Gray Oral test. There was variation by system. Of those making the most progress, the following are the proportion in each system whose initial reading level was 3.1 or higher:

...System I, 58 percent
...System II, 72 percent
...System III, 56 percent
...System IV, 85 percent

There was also variation by level of teacher. Of students with a high school graduate teacher, over 50 percent of those who made the most progress started the program reading at 3.0 or below, while the comparable figure for the college graduate and the certified teachers was slightly less than 30 percent. In other words, the students in classes taught by high school graduates were reading initially at a lower level than the students taught by certificated and college graduate teachers.

Of those students who made little or no progress, half were initially reading above third-grade level and half below. There was no difference in the initial levels of this group either by system or level of teacher.

B. Analysis of Variance

To determine and assess the significance of differences in reading gains, both analyses of variance and correlations were used. The mean gain for each class was determined and was the basic datum for the analyses of variance. The differential gain or loss from initial to final testing is presented in terms of first and last testing with Gray's Paragraphs and from third- or sixth-grade gains on the Iowa Tests of Basic Skills. These latter tests were broken into subtests: vocabulary, reading comprehension, language skills, work study skills, and arithmetic, as well as utilizing composite scores.

The analysis was intended to include gains for the following categories as dependent variables: total sample, Negro, white, Spanish-American, male, female, twenty-nine years of age and under and thirty years of age and over. However, because of the lack of male and Spanish-American participants in certain geographic areas, it became unrealistic to do subgroup analysis for these groups. Of the 108 classes, twenty-one were lacking males, and thirty-three were lacking Spanish-Americans.

The findings reveal that in terms of reading systems, level of teacher and state, there were few significant differences in gain scores. Where there were significant differences in gain scores it was in relation to level of teacher and state.

The detail of the analyses of variance follows:

1. Total Sample

a. Gray Oral Reading Paragraphs Test

No significant differences at the .05 level of confidence were found to exist for the mean total sample change values for any of the three main effect or independent variables: state, reading system, or level of teacher preparation. In fact, even using a .25 level of confidence, there were no statistically significant differences for the independent variables. For all the subsamples except the white group, this test yielded no statistically significant differences for any of the three independent variables.

b. Iowa Test of Basic Skills

On various subtests of this test significant recurring differences were found. The major finding was that there was a difference in gains in the three states. This difference appeared in three of the five subtests at various levels of confidence as follows:

1) reading comprehension - .05
2) work study skills - .001
3) arithmetic - .001

The difference also appeared in composite change scores at the .001 level of confidence. As can be seen below, on all three subtests students in New York State made the most gain and those in New Jersey the least.

Table 34

Significant Mean Changes on ITBS Subtests by State, Total Sample

ITBS Subtest	Level of Confidence	New Jersey	New York	California
Reading comprehension	.05	1.0188	1.3979	1.2002
Work study skills	.001	.7432	1.4928	1.0372
Arithmetic	.001	.6828	1.2759	.9217
Composite	.001	1.0366	1.4684	1.1820

In the total sample there was also a significant difference by level of teacher on the work study skills subtest (.01 level of confidence) and the composite score (.05 level of confidence). As can be seen in Table 35, the students in the classes of high school graduate teachers showed the most gain.

Table 35

Significant Mean Changes on ITBS Subtests by Level of Teacher Preparation, Total Sample

		Teacher Level		
ITBS Subtests	Level of Confidence	H.S. Grad.	Coll. Grad.	Cert.
Work study skills	.01	1.3249	.9842	.9641
Composite	.05	1.4072	1.1165	1.1634

2. Female Subsample

a. Gray Oral Reading Paragraphs Test

As was true in the total sample analysis, no significant differences were found to exist for the mean change values for any of the independent variables, nor were there any significant interaction effects. For all the subsamples, with the exception of the white population, which is questionable because of the paucity of data, the Gray Oral Test yielded no statistically significant differences for any of the three independent variables.

b. Iowa Test of Basic Skills

Considering that the vast majority of participants in the field test were females, it is not surprising that the analysis of the female subtests closely resembled the findings in the analysis of the total sample. The difference in gain by state was repeated in this subsample at various levels of confidence as follows:

1) reading comprehension - .05
2) work study skills - .001
3) arithmetic - .05
4) composite - .01

As can be seen in Table 36, students in New York State showed the most progress and those in New Jersey, the least.

Table 36

Significant Mean Changes on ITBS Subtests by State, Female Subsample

ITBS Subtests	Level of Confidence	New Jersey	New York	California
Reading comprehension	.05	.9111	1.3515	1.1043
Work study skills	.001	.7445	1.4623	.8958
Arithmetic	.05	.6504	1.1517	.9539
Composite	.01	.9865	1.4225	1.1604

In this female subsample, there were significant differences in student progress on work study skills and in the composite change according to the level of preparation of the teacher. The students in classes of high school teachers showed the most gain. (See Table 37.)

Table 37

Significant Mean Changes on ITBS Subtests by Level of Teacher Preparation, Female Subsample

ITBS Subtests	Level of Confidence	Teacher Level		
		H.S. Grad.	Coll. Grad.	Cert.
Work study skills	.01	1.2733	.9546	.8746
Composite	.05	1.3876	1.0708	1.1113

3. Negro Subsample

Negro participants in the field test represented a large proportion of those who took part in the seventeen-week program. In fact, they represented 69 percent of the participants in New Jersey, 74 percent in New York and 45 percent of those in California. Because of this, it was not unusual that they, like the female subsample, yielded results similar to the total sample. In general, it can be stated that Negro students in New York made more progress than those in New Jersey as measured by the Iowa Test of Basic Skills. In addition, as with females and the total sample, when there was a difference in teacher level, the high school teachers' classes made the most gain. (See Tables 38 and 39.)

Table 38

Significant Mean Changes on ITBS Subtests by State
Negro Subsample

ITBS Subtests	Level of Confidence	New Jersey	New York	California
Reading comprehension	.01	.8972	1.3731	1.3642
Work study skills	.001	.6438	1.4652	1.1567
Arithmetic	.01	.5975	1.1486	.8328
Composite	.01	.9426	1.3923	1.2075

Table 39

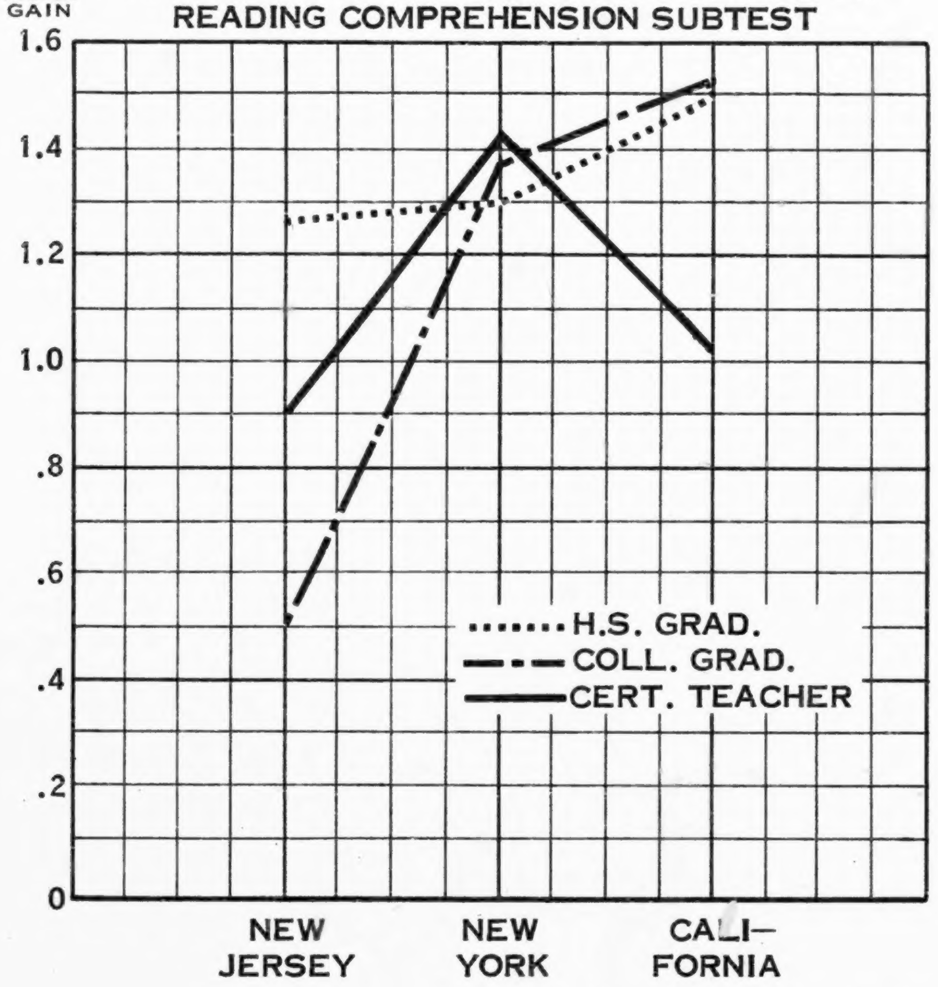
Significant Mean Changes on ITBS Subtests by Level of Teacher Preparation
Negro Subsample

ITBS Subtests	Level of Confidence	Teacher Level		
		H.S. Grad.	Coll. Grad.	Cert.
Vocabulary	.05	1.8521	1.3094	1.5629
Work study skills	.05	1.3495	1.0270	.8889
Composite	.05	1.2772	1.0654	1.0835

For the Negro subsample, there was significant interaction effect of state by level of teacher preparation, that is, teacher level differences varied from state to state. Specifically, in New Jersey, high school teacher classes showed much more progress than the other two levels. In New York, there was little difference by level, while in California the certified teacher classes showed considerably less progress than either high school graduate teacher or college graduate teacher classes. Schematically these relationships can be seen in Graph 1.

GRAPH 1

INTERACTION OF STATE AND LEVEL OF TEACHER PREPARATION FOR NEGRO SUBSAMPLE ON READING COMPREHENSION SUBTEST



.05 LEVEL OF CONFIDENCE

It is evident from this graph that the gains in reading comprehension made by classes taught by the high school graduate were consistently high in all three states. Also, in California the mean gains by both high school and college graduate teachers were relatively high. In New York State the gains by all teachers on this subtest were about equal and high. Since all teachers were given the same training in all three states and the students were randomly placed in classes by the same method, these differences by state are not readily explained.

4. Over Thirty Years of Age Subsample

The analysis of this subsample yielded the same general conclusions as the previous analyses. On some subtests there were differences among the states and by level of teacher preparation, and there was also an interaction effect for state by system. Where the state differences appeared, New York students made the most achievement, and where teacher level differences were significant, high school graduate teacher classes showed the most progress. (See Tables 40 and 41.)

Table 40

Significant Mean Changes on ITBS Subtests by State, Over Thirty Years of Age Subsample

ITBS Subtests	Level of Confidence	New Jersey	New York	California
Work study skills	.001	.8801	1.5302	1.0895
Arithmetic	.05	.7634	1.2690	.9308
Composite	.05	1.1328	1.4860	1.2367

Table 41

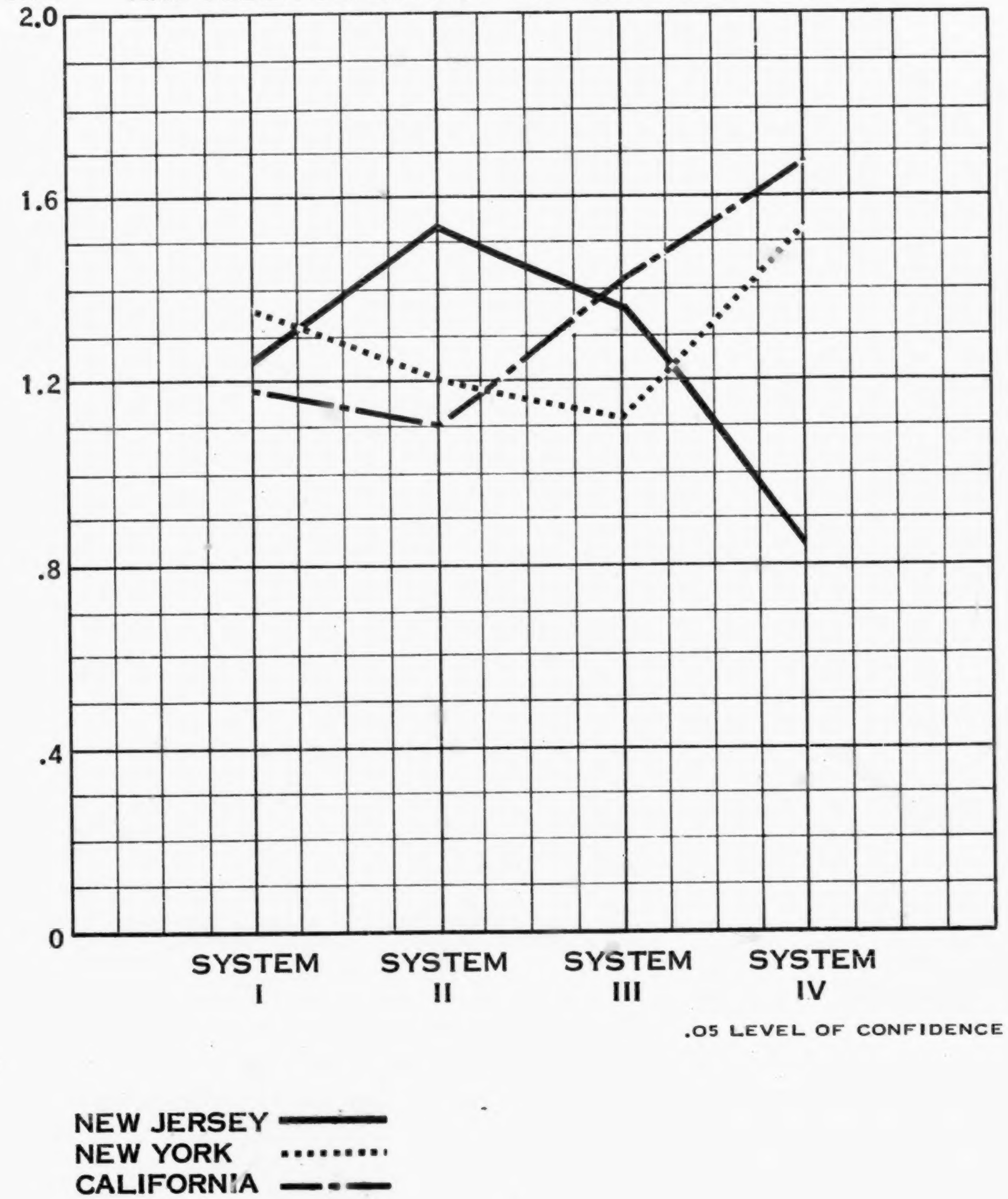
Significant Mean Changes on ITBS Subtests by Level of Teacher Preparation, Over Thirty Years of Age Subsample

	Level of	Teacher Level		
ITBS Subtests	Confidence	H.S. Grad.	Coll. Grad.	Cert.
Vocabulary	.05	1.9977	1.4906	1.7191
Work study skills	.01	1.4720	1.0355	.9924
Composite	.05	1.4921	1.1281	1.2353

The interaction of state and system appeared in the language subtest for this subsample. These interactions are plotted in the following graph, which shows the relationships between and within the states and systems.

GRAPH 2

INTERACTION OF STATE AND SYSTEM FOR THE 30 YEARS AND OLDER SUBSAMPLE ON LANGUAGE SUBTEST



It is evident that the wide difference between gain scores in System IV and the relative wide gains in System II account for the first significant difference involving system. However, this is an interaction and due to state differences across systems rather than an effect due to overall system differences.

5. Twenty-Nine Years of Age and Younger Subsample

The results with this subsample were in many ways similar, while in other ways dissimilar, to the results of its counterpart of those over thirty years of age. On some of the subtests of the Iowa Test of Basic Skills, there was a state difference and, as was true of the other age group, students in New York State showed the most progress. However, this significant difference was apparent on different subtests for the two populations at different levels of confidence.

Table 42

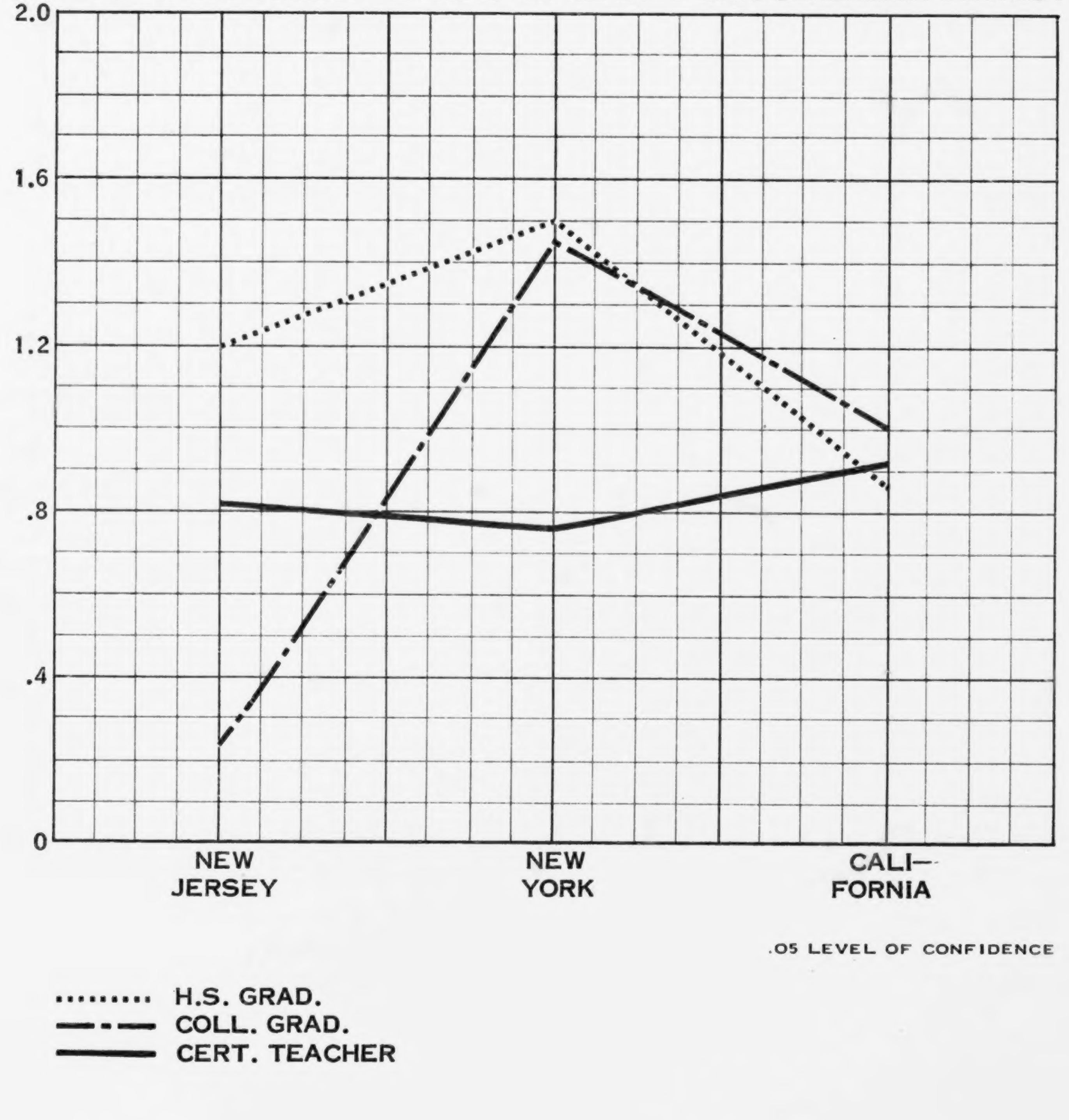
Level of Confidence of Significant Mean Changes on ITBS Subtests by State, Age Group Subsamples

ITBS Subtest	29 and Under Level of Confidence	30 and Over Level of Confidence
Vocabulary	.05	-
Reading comprehension	.05	-
Language skills	-	-
Work study skills	.01	.001
Arithmetic	.05	.05
Composite	.01	.05

While the reading comprehension subtest yielded no significant differences for any of the main effects or interactions for the older group, there was an interaction for the younger participants between state and level of teacher preparation. Schematically, the relationship of these two variables can be seen in Graph 3.

GRAPH 3

INTERACTION OF STATE AND LEVEL OF TEACHER PREPARATION FOR THE 29 AND UNDER AGE GROUP ON READING COMPREHENSION SUBTEST



It is interesting to note that although the differences in gain scores were the smallest between level of teachers in New York for the Negro subsample on this test, the smallest difference in gain scores is found in California for those under twenty-nine. As in the Negro subsample, the poor showing of the college graduate teachers in New Jersey was most marked. It would indicate, however, that in New York the certified teacher was least successful with the younger group. This could be due to the fact that the younger student recognized something in the certified teacher which was similar to that encountered in the earlier school experience. However, this argument falls down when California is observed.

6. White Subsample

Of the six subpopulations analyzed, it was for the white subsample alone that there was a significant statistical difference on the Gray's Oral test for any of the three independent variables. For this population, it was found that there were strong differences among the three levels of teacher preparation. Table 43 shows the mean change scores for this white subsample. The differences in teacher preparation were significant at the .01 level of confidence.

Table 43

Significant Mean Change Scores on Gray's Oral Test by Level of Teacher Preparation, White Subsample

Teacher Level	Mean Change
H.S. Grad.	2.5796
Coll. Grad.	1.4912
Cert.	1.7238

It can be seen that, as was true on the Iowa subtests with other subsamples, when a level of teacher preparation difference existed, the high school graduate teacher classes showed the most progress.

Interactions involving the three independent variables were found to be significant for this white group on the Gray's Oral test as shown in Table 44.

Table 44

Significant Interactions on Gray's Oral Test, White Subsample

Interaction	Level of Confidence
State by level of preparation	.01
System by level of preparation	.05
State by system	.01

Each of the thirty-six (3 states x 4 systems x 3 teacher levels) cells in the analysis of variance represented three class means. In ten of these classes there were no white students who completed the project. In eight of the cells there was either only one student's change score or only one change score representing more than one student. Hence, for eight cells, there was no estimate of sampling error for the cell mean change score. This paucity of data makes the findings for the white subsample somewhat unreliable and requiring tentative interpretation.

On the Iowa Test of Basic Skills subtest for the white subsample there were significant differences for each of the three independent variables. On five of the subtests (reading comprehension, language, work study skills, arithmetic, and composite) there was a significant difference between the systems. Table 45 shows these differences.

Table 45

Significant Mean Changes, ITBS Subtests by Systems, White Subsample

	Systems			
ITBS	I	II	III	IV
Reading comprehension	1.0327	1.3066	.6598	1.1682
Language	.9154	1.2253	1.2299	1.3539
Work study skills	.8102	1.0490	1.0417	1.2915
Arithmetic	1.0003	1.1077	.5631	1.0161
Composite	1.0324	1.1962	.8759	1.3907

The white subsample was the only group for which a difference appeared between the gains made by systems.

There were differences also by state. However, for the most part these differences closely resembled the state differences reported previously for other subsamples on the Iowa Test of Basic Skills. In general, the most gain was made by students in New York and the least gain by those in New Jersey. Table 46 reports these differences by states.

Table 46

Significant Mean Changes, ITBS Subtests by State, White Subsample

ITBS Subtests	New Jersey	New York	California
Vocabulary	1.2909	2.0037	1.5564
Reading comprehension	.4940	1.4627	1.1687
Language	1.2852	1.2588	.9994
Work study skills	.7374	1.3947	1.0122
Arithmetic	.4659	1.5016	.7978
Composite	.8597	1.5382	.9734

In addition to state and system differences, there were significant differences between the various levels of teacher preparation. As was evidenced with other subsamples, when there was a difference between the teachers, the high school graduate teacher classes showed the most progress. The table below indicates the mean gain on the various subtests.

Table 47

Significant Mean Changes, ITBS Subtests by Level of Teacher Preparation, White Subsample

	Teacher Level		
ITBS Subtests	H.S. Grad.	Coll. Grad.	Cert.
Vocabulary	1.9247	1.6375	1.2888
Reading comprehension	1.2018	.7212	1.2024
Arithmetic	1.2768	.6001	.8885
Composite	1.3059	1.0378	1.0277

C. Analysis of Data From Correlation Matrix

A correlation matrix was computed using the following test scores: 1) Initial Gray's Oral Scores, 2) Final Gray's Oral Scores, 3) Third Grade ITBS - Composite Scores, 4) Sixth Grade ITBS - Composite Scores, 5) Third Grade ITBS - Reading Comprehension Scores, 6) Sixth Grade ITBS - Reading Comprehension Scores, 7) Gray's Oral Change Scores, 8) ITBS - Composite Change Scores, 9) ITBS - Reading Comprehension Change Scores.

In addition, the following demographic characteristics were dichotomized and used in the matrix: race, sex and age. The dichomotized characteristics were: 1) White/nonwhite, 2) Negro/non-Negro, 3) Spanish-American/non-Spanish-American, 4) Male/nonmale, 5) Under thirty/not under thirty.

Of the roughly 1,900 adults who were eligible for and assigned to classes in the field test program, almost 1,300 participants had scores on both the initial Gray's Oral Test and the third-grade level of the Iowa Test of Basic Skills. For these persons, there was a significant and relatively large positive correlation between their scores on these two instruments. The correlation between initial Gray's Oral scores and the Iowa scores was:

...0.6252 for the Iowa composite scores
...0.5811 for the Iowa reading comparison scores

In other words, those who scored relatively high on one test tended to score relatively high on the other test. This is a significant finding, for it supports the method used in screening the students and indicates that the simpler test can be used to measure student gain.

A moderate relationship existed between initial Gray's scores and the final or sixth-grade Iowa scores. The correlation between initial Gray's scores and final Iowa scores was:

1) 0.5338 with the sixth-grade Iowa composite scores
2) 0.4568 with the sixth-grade Iowa reading comprehension scores

The correlation between entering Gray's scores and changes as measured by the ITBS was negative. However, it is valuable in that this correlation is evidence of a possible trend. Those who scored high on the initial Gray's Oral correspondingly made the least progress on the Iowa. Keeping in mind the existence of the correlation between initial Iowa and Gray's scores, it is probable the negative relationship may be due to a ceiling effect on the Iowa. But it may also be a regression effect.

Essentially the reading comprehension and composite subtests measure the same things. The correlation between these two tests at the third-grade level was 0.9126 and at the sixth-grade level 0.8638. The correlation was also high (0.7129) for change scores on these two Iowa subtests.

The correlation between third- and sixth-grade composite scores was 0.7694, and the relationship between third- and sixth-grade reading comprehension scores was also very strong (.6706). In fact, for all combinations of the third- and sixth-grade scores for the composite and reading comprehension tests the correlations were at least of the .6000 magnitude.

Strong relationships existed between the final Gray's Oral scores and all of the Iowa tests. Listed below are the correlations of various Iowa tests and the final oral reading ability scores.

Table 48

Correlations of Final Gray's Oral Scores with Scores on Iowa Subtests

ITBS Subtests	Final Gray's Oral Correlations
Third-grade reading comprehension	.5435
Third-grade composite	.5946
Sixth-grade reading comprehension	.4557
Sixth-grade composite	.5809

When the dichotomized demographic characteristics were correlated with the test scores in the matrix, a great many of the correlations were not statistically significant and of those that were significant, many were for all practicable purposes zero. Their significance was a consequence of the large sample rather than due to a substantial degree of relationship between two variables.

The nontrivial correlations tended to bear out the observations of the field test staff. In general the younger students had an advantage on the Iowa tests. It was also shown that the Spanish-American students had a definite handicap on Gray's Oral Paragraphs, while the Negro participants showed a relatively higher initial reading level on this test. There was also no material difference in gain as a function of ethnic group.

In addition, the relationship between reading progress and I.Q. was examined statistically using the Gray Oral change scores and the tentative I.Q. scores on the WAIS vocabulary list. There was no meaningful correlation between these two sets of scores.

VI. OTHER STUDENT ACHIEVEMENT

The development of the students in the field test is represented in only a limited way by the change in achievement scores reported in Chapter V. There were other significant learnings in all classes. The total experience had many meanings and may have opened many doors.

In this chapter, the attempt is made to present the range of student learnings and development, and to convey the feelings of students themselves.

Included in this total learning process were the following areas in which development was seen by teachers and observers, and expressed by students:

1. Self-esteem and self-confidence

2. Eagerness to learn and a new attitude toward schooling

3. Reading, including the new-found ability to read bus signs, newspapers, letters and children's homework

4. Improved family relationships, particularly with children and their problems in schooling

5. Increased confidence and ability to speak and to express ideas in a group

6. A new awareness of what it could mean to have a sense of belonging--in a group and in our society

7. New knowledge and concern about the problems of our communities, our whole society, and the world at large

8. Increased ability to write, and to use writing for business and civic purposes

9. Increased understanding of the mathematics of everyday life, especially in the handling of money and for simple household mechanics

10. Acceptance and friendship with others different in color, background and language

11. New levels of aspiration, for jobs and for a better life for themselves and their families

12. A new sense of power to take initiative, take responsibility as citizens, and find ways to improve their position

It would not be true, of course, to say that all students made equal gains in all of these directions. Some made little or none. But statements from supervisory teacher reports, and student interviews from the three states substantiate the areas of student growth outlined above.

Although impossible to quantify these findings because of their qualitative nature, there is enough consistency in reports from all sources in the three states to make it possible to state categorically that these types of learnings were typical rather than atypical

A. Nonquantifiable Learnings of Students

1. Changes in Self-Esteem and Self-Confidence

Student responses point to a growth in self-esteem. "Learning makes me feel important," one student commented, adding, "I feel better about myself." Another said, "It makes my life brighter." One woman who had been under psychiatric care and who was deeply apprehensive about people no longer needed the prop of therapy nor did she fear people any longer. She had made friends in her group, had grown in self-confidence, and wished to continue her education. Many students insisted that they "talked more" now that they had new words to use--that they could now "speak up." Every group interviewed said this, and there was wide agreement within the groups about increased fluency. One woman said that she now felt confident enough to return or exchange items of clothing she had previously bought in a store. In the past she was afraid to exercise this option.

Many attested to their new self-confidence when speaking to others outside of the program. "I speak better," one student said, "I'm a different person." Another said,"I'm changed for the better. Before starting school I always felt depressed. Now I mingle more, feel better and I'm less nervous. Instead of thinking about my problems I have no time to think." Almost passionately another said, "It make (sic) me feel like getting up and saying words." One Puerto Rican woman whose English was still poor said, "now people knock on my door I speak to them--before I didn't know what to say." One woman expressed the growth of self-confidence simply and effectively. She said, "I think more of myself now--I'm happy and proud." Again and again those interviewed returned to this same point. "I used to be ashamed around people and never say anything--they always called me quiet. Now since I came to school I learned to talk to people more."

The psychological deprivation from which the poor suffer seems to have been in part mitigated by their new found sense of purpose. Meeting in groups, quite apart from literacy training itself, was of importance according to the testimony of many in the program. "We are like one big family," one student exclaimed. Students looked forward to being together, to conversing at the coffee breaks, to exchanging views. "We're tired, but when we're home we're not satisfied. We really know we are learning something. The day is just right." More than formal learning was taking place.

One student said that the class "gives you more get up and go." The discovery that one is never too old to learn was fresh and new to literacy project students, and they savored this insight won through their own experience. As one woman put it, "I looked back on myself before I started to school, and I just seed (sic) something empty, and since I started school--I was a nervous wreck before--but since I've been coming to school I see so much difference in myself. I was always sick, now I see the doctor just once or twice." This is one of a number of instances where a sense of purpose and accomplishment reduced the incidence of illness. The therapeutic "spin-off" was a genuine, albeit unplanned, consequence of the classes.

2. A New Attitude Toward Learning

One teacher in California, reporting on the students in her class, epitomizes the reports from many sources regarding the effect on attitudes toward learning in general.

> The students exhibited good motivation. They have been enthusiastic, curious, very desirous of continuing with more education. Reading opens up a new world to them, new self-respect and self-confidence in the possibility of 'not being dumb, after all;' 'an adult really can learn to read, and by reading, learn more' about the society, the country and the world in which he lives. Reading holds most fascination for the student because it permits him to understand information in social studies, and when

> arithmetic skill is attained, to read instructions in lessons and for some, to pursue a special interest in math. Here again the student is surprised to discover he can learn this 'mysterious' and feared jumble of numbers. Past experience for these people has left them believing that only 'brainy,' 'smart' people can 'learn about numbers.' Their pleasure to discover that they can learn, is hard to describe; one has to see their faces.

In response to the questions about the "best" and "worst" experience in the class, one research supervisor reported:

> A Cuban refugee said his best experience was learning to spell in English. 'The day I won a spelling bee made me happy to know I was making progress.' His worst experience: 'I do not speak English well and I says words that mean another thing and sometime I mean to say something about the past and I say the future and get the meaning all mixed up and I get confused and confuse everyone else.'
>
> One man said his worst experience is trying to learn 'now that I'm grown. I never admitted it before that I couldn't read or write. Coming to school was a bad experience at first but now I realize I need this education and more.'
>
> One student indicated her best experience was recognizing her limitations. She said, 'At first when I started to school, I thought I was smart, but I found out how dumb I was. I wasn't as smart as I thought. I didn't know half as much as some of the other students. My six-year-old daughter helps me to pronounce the words correctly. All my children help me because they want me to be ahead of the class.' The same woman said her husband had 'strong feeling toward me going to school. He says I don't need to go to school because it's not doing me any good. He doesn't want me to learn anything.'
>
> Another woman who had to drop out on the sixty-fifth day said that she just prays the program will continue so that when she is well again she'll be able to go back to school. She feels she has a much better vocabulary now and she uses it well.

Attitudes toward learning have changed. The students expressed respect for learning, a genuine thirst for all kinds of knowledge, and a greater appreciation of schooling as vitally important to their families. Their world seems to have expanded, both by their own admission and from what was observed. Several stated they had visited their children's teachers for the first time, gone to PTA meetings, attended a school bond issue meeting, read newspapers, taken an interest in what lies outside their immediate environment, and written formal and personal letters.

3. New Found Ability to Read

For many students the new found ability to read has opened up a completely new world to them. In explaining what this means, one Gypsy girl said: "I think my best experience was reading about the war and the presidents, and about the law. Most of all I think that the law was the most wonderful experience for me."

In another situation, Mrs. X was standing on the street corner when the state supervisor of the research staff met her after class. Her face was beaming and she said, "I am waiting for the bus. I have never been able to take the bus before because I couldn't read the signs and was afraid I would get lost. Now I can go any place I want to."

One day the adult education director in Richmond, California saw two women standing in the hall and identified them as the mother and sister of a student who was a Gypsy. (In California there were some sixty Gypsies in the classes. They had been persuaded by their caseworker to enter the project. This took both skill and persuasion.) The educator told the couple that the student wouldn't be out of class for some time. They told him they had not come to see her, but the teacher. They wanted to thank her. This is the story they told.

> The mother, who lived with the student, was ill and had to take medicines periodically. Neither she nor the student could read the labels on the medicine. As a result the sister of the student, who could read but lived several blocks away, had to come to her mother's house all during the day and night to administer the medicines. Now the student could read and could give her mother the medicine. They were most grateful to the teacher.

Positive reactions to the reading program were expressed by one student in the following manner. "I now finish books that I used to throw away after reading a couple of chapters." Another said, "What I read now is more interesting. I read the whole newspaper and not just the comics."

In one class, the records which supplemented the materials were highly praised. The students felt that it was important to hear the correct sounds and that they improved their pronunciation skills by listening and practicing with the teacher's guidance. Several of the students commented that they had improved word attack and word analysis skills to a point where they were no longer fearful of encountering new words which would normally discourage them from reading.

4. Improved Family Relationships

In each of the states, students reported that family relations had improved. In some cases, however, family relations were going through a crisis. This was particularly true of some Spanish-American women whose husbands did not like the new freedom which education promised.

Illustrative of the improved family relations are the following excerpts from student statements. One woman said: "I'm not running around anymore." and, "Now I have something interesting to do during the day and I'm helping myself become a better parent at the same time."

Many of the students indicated that they now took a more active interest in their children's schoolwork and could be of "real" assistance to them.

Students had gained satisfaction in applying their newly found skills to the home and were pleased that their children had responded so positively to them as learners. One woman reported that she was now able to read her daughter's third-grade readers. "I have learned a lot since I've been here," she said, "I can help my lower grade children. Now they think more of me--I feel so happy." Another said how proud and pleased she was to be able to help her second-grade grandson with his work. One woman explained with feeling that her going to school was helping her children to stay in school. "They (the children) think more of us now, it gives them a reassurance--they see that if the mother is interested in education it makes them push harder because they don't want the mother to get ahead of them." Another agreed, saying, "They say, 'If grandma can make it, I can.' They're fighting very hard now!"

The mother of a second-grade youngster was delighted to have received and been able to read a letter from her son's teacher commenting on the boy's signal improvement and his new found interest in school work. It was clear to the mother what accounted for the change. "He wants to do better so he can get a good mark just like mother." The converse of this example is also the case--intermediate-grade children wanting to help their mothers with homework, or urging their mothers to do their own homework without help from offspring because that would be making it too easy for mother! A Puerto Rican mother whose English was poor said that she could now understand her English-speaking children whose Spanish was poor, and she even attempts to speak English to them.

Another student reported:

> Now I can sit down and make out a list to send the kids to the store and I'm interested in doing it. I wrote a letter to my oldest son in the Marines. I didn't have an opportunity to go to school when I was growing up. I'm glad this opportunity came knocking at my door. I was ashamed before--but not any more.

Another delighted mother said:

> Yesterday I came home from school and on the kitchen table was a note from my son. It said, 'Mom - I went to the library - Be home later.' I could read it. It was the first time my son did not have to call a neighbor and ask her to give me the message. I felt real good--I could read it myself.

"My five think my going to school is wonderful," one student said. "We talk more at home," she added. "The other night my daughter asked me how to spell a word," said an obviously pleased mother. "I go to PTA meetings now." A classmate added, "I used to didn't go either, but I go now. I also go to teacher conferences. It makes you feel more interested in talking to teachers." In another district a student said that she was trying to build up her children's vocabulary, saying that the children "feel more grown-up--if Mommy goes to school why don't we!" A grandmother said coming to school had made her life "brighter" and she was helping her grandchildren learn to read. Another student in the same class summed it all up by saying simply that "now there's more family feeling." Another said the most important thing was being able to spend more time with her husband and sharing together.

A mother said:

> My best experience in the project was starting school. My children even wake me up in the morning so I won't be late for school. Since I started school, I've become more interested in my child's work. When I first came to school I felt lost because I was the only Negro of about sixty-five students. They were so friendly I forgot all about my fears.

One student, a middle-aged man, indicated his best experience was having his wife drill him on his homework. She had really taken a part in helping him in school. This student could not read or write when he started school. Now he can read quite a bit.

A student in answering the question regarding the best experience replied:

> Getting away from my husband. It's a good help for family problems. He's out of a job and we both are home all day. We stay at each other's throat. But now that I'm out of the house all day we get along better.

However, many of the Spanish-American women indicated that this was their first experience being away from home on their own. They found this very enjoyable. They liked to meet people. They liked to exchange ideas with others, and for the first time in the lives of many of these women they were feeling that they were individuals--that they were people in their own right. However, some indicated that their husbands were jealous of their coming to school, and in some cases this was a serious problem, although it did not cause any trouble in the class.

Perhaps the most dramatic case of changed family relations was one reported by a caseworker about a male student who had begun to read a little as the project came to an end:

> Before the man entered the class, he had been abusing and neglecting his children. A child welfare worker had been assigned to the case to protect the children. After the father had been in the class for several weeks, the child welfare worker asked the employment counselor what had happened to the man. She was no longer needed on the case because the father was no longer abusing or neglecting his children.

This can only be explained in terms of new self-respect which the father had gained in the classroom.

5. Increased Ability to Speak in a Group

Generally students felt that the program had been instrumental in improving their relationships at home with their families, and in the community. One woman indicated that she isn't as shy as she used to be and that she is now actively involved with a local PTA. However, some students indicated that they were still afraid of "making a fool of themselves" at public or community meetings.

Speaking in the classroom was for many a painful experience at first. But gradually as shyness wore off, they learned to speak up, to read out loud and talk.

Some reported that they were carrying over this new learned ability to community and church groups. One woman proudly announced, "I read the Bible out loud in church."

6. Awareness of the Meaning of Belonging to a Group

One student felt that the best experience he had was working with others in the class in filling out an application for work. He now had confidence. He liked the idea of having mixed age groups in the class. His worst experience was wondering what people would think of an older man trying to start learning at his age. He learned to enjoy his classmates and got along very well.

Another student commented about his feeling for his class. "This project makes me feel wanted and not a castoff. It makes me feel wanted and important."

From California one young fellow said:

> I like this school because people pay me some attention. When I was in regular school, no one paid me any attention and I did not like to go. Here we all work together and this makes me feel good. Also I am learning very well.

7. New Awareness of the Community

New awareness of the community was expressed by many students. Field trips to the state legislature had been a high point for many students in California. In other states classes visited the U.N., museums, libraries, city council meetings, Independence Hall and many other points of interest. They appreciated these opportunities to learn about their state, city and nation. Their interest was expressed by a research staff member in the following report:

> When students in one district were told by the local adult education director that classes would continue through June, 1966, but would be curtailed to the morning program, they were disappointed because they felt that the afternoon program (arithmetic, social studies, and anything else an individual teacher deemed appropriate) was as worthwhile

> as learning to read. It is clear from conversations with the students that, by virtue of their growing knowledge and their discernable mastery of reading skills applied outside of class, they are extending the limits of their social world...and have acquired an interest in what is happening beyond the limits of their circumscribed environment. A striking illustration of this new social perspective comes from one of the districts. There two students in the literacy project are now actively campaigning for seats on the local Community Council on Economic Opportunity, and according to the latest reports, one of them stands a very good chance of being elected.

Several classes decided to go as a group to register to vote for the first time. One student asserted, "The class makes you understand what you are voting for today." Another stated it more broadly: "School learns you about the world you live in and about the moon, sun, and stars."

Some social studies classes in California used a current events weekly which sparked discussions of local, state, national and international affairs. One student commented that she always thought the Boston Tea Party was a social gathering, but now she knows what it was and why it happened.

8. Increased Ability to Write and Use the Written Word

Letter writing was not easy for most students even by the end of the program. However, most tried to write letters. Many were successful. But successful or not it was a meaningful experience. One student reported that the most important thing he gained from the project was being able to write a letter. "I can write a letter for the first time in my life. The other night I wrote one, but if I wait ten or twenty minutes to reread the letter, I can't understand what I write."

Some have learned how to fill out job applications, write letters of job application, business letters and conduct social correspondence. Others have learned about driving procedures, rules of the road and driver's license requirements.

For one student who was a junk collector, the map work done in afternoon sessions was of special usefulness. He is now able to travel from place to place without stopping for directions. Once after driving over 100 miles using his map he reported to the class on his successful trip.

9. Increased Understanding of Arithmetic and its Application

Fractions and consumer arithmetic were generally considered to be the most interesting topics covered in the arithmetic program. However, there was some rejection of the arithmetic workbooks on the grounds that they were like children's books.

One student stated it simply, "Arithmetic is good because it is useful." Another mentioned the best experience he had was being able to check the grocery list to be sure he was not being cheated. He told the class about being overcharged $2.00 one time and how he made the man write down the items and add them up again, admit the error and refund his money. He said this had occurred two or three times since he learned arithmetic in the classes. Now the man in the store knows better than to try and cheat him, but he wonders how often this has happened in the past before he could read and do the figuring necessary.

Arithmetic was one of the practical skills acquired by students that gave them added confidence in dealing with merchants, employment agencies, and banks. One woman who can now endorse her welfare check because she has learned to write her name felt that cashing her check at the local bank and endorsing it before the teller was a high point in her life.

10. Acceptance of Friendship with Others Unlike Themselves

One unlooked for benefit of the program was the opportunity for people of different ethnic groups to mingle. Participants in the program have at least had the experience of coming to know a member of another ethnic group in a social situation. Rarely does this opportunity occur in the slum culture, where isolation from others who are different in color, language, or life style is virtually complete.

A qualitatively different social environment was created, affording people an opportunity to learn about each other's problems and concerns, and bringing together Negroes, Spanish-Americans and whites in a congenial and nonthreatening atmosphere. One student said, "Class makes you learn how to treat people more better." Observations of the classrooms and hallways sustain this view.

Perhaps echoing the feeling of other students, a young Negro woman student said, "My best experience was having the teacher concerned about me learning. I've never had anyone to care if I learned anything or not. The teacher cared."

Friendships between teachers and students and among students flourished in many classes. One class, for example, planned several gatherings outside school hours which included the teacher. In Camden, with the help of a bowling alley, several classes formed a bowling league. There were many reports of students writing to sick classmates in the hospital, sending cards and planning "welcome back" parties. Parties on or around holidays were common and much enjoyed.

These are commonplace experiences to most people, but for many people in the classes, a new experience.

11. New Levels of Aspiration

Almost across the board, students clamored for extension of the classes beyond the closing date. The research staff repeatedly was asked to intercede with "them" to continue classes. While it is true that students received an additional allowance of roughly $40 a month to cover the costs of coming to class and had their child care concerns looked to, it was evident from conversations with students and teachers that the desire to learn was the impetus for their efforts to continue in the program. Interestingly, the acquisition of basic skills of reading and writing accounted for only a part of the new found interest in learning. Many students were genuinely interested in learning "that" as distinct from learning "how." Many derived real pleasure from learning "things I didn't know before," and this seemed to change their perspective in many ways.

Frequently students would use the word "ambition" to describe what had happened to them. "I would like to learn a skill now," said one, and another spoke of wanting to get a "decent job." One woman said earnestly, "I would like very much to be self-supporting, to have some security." Several women expressed a desire to learn to sew, and many wanted to become nurses aides. The men in the program weren't as communicative, but several of them did say that they were anxious to acquire new skills. Material independence is cherished by many, and they see these classes and other educational opportunities as instrumental in their becoming independent. Even those, who, because of advanced age or infirmity, have little likelihood of becoming self-supporting were nevertheless intent on becoming so.

"I would like for this class to go on awhile longer because I plan to go on to school elsewhere if I can," said one student. She added, "I am learning very much in this program. And I feel that if I could study in this program a little longer, it would give me a better start for advanced education. I plan to go to college." One woman explained, "I want a good job and to bring up my children the right way. I feel more education would help. Another student told her case counselor that "it was a great opportunity to have a second chance at education. "I will do my best, not to let down the ones who made this chance possible for me and others like me. I sincerely hope that the many people given this second chance will appreciate it as much as I do."

One student with a specific career objective said:

> I've always wanted to do some kind of nursing but if you can't read or write on a chart or read a label on a bottle of medicine no one will hire you. I hope I can go on learning so that I can get a job in a hospital, or even a home, to nurse and help sick people. And I'll be helping myself at the same time.

12. A New Sense of Power to Take the Initiative and Responsibility as Citizens

One student said the most important thing gained is that now she can get her American citizenship because she has learned to read English. She felt that the teacher trained her so thoroughly that she can perhaps even pass a test for a job.

Another said that the best experience he had was being successful in passing the driver's test. "I paid $6.00 trying to pass that test. I only knew a little English at the time and I have gone back three or four times. I have passed it now and it only took seven minutes for me to complete the written test."

Some students claimed to be better shoppers now that they can read labels, compare prices, count money and "know if we're getting the right change or not." One student, commenting on the pleasure she derived from learning things about American history she hadn't known before, exclaimed, "We feel like we're not beholden."

The student who said, "I like to learn everything" was expressing the majority view. They were grateful for information that would otherwise be considered common knowledge. So highly motivated are those who completed the program that, upon hearing of a cut in government funds and the prospect that continuing classes would not be organized, they repeatedly asked for information about "what is going to happen to us." One indignant student exclaimed "if we are students why can't we go to school like children until June?"

The classes generated a respect for learning and an interest in knowledge for its own sake. The students wanted to acquire a sense of location in the world that lies outside their immediate neighborhoods, and wanted it through the personal relationship of teacher and student. As one woman put it, "Something has come out of me--I begin to see now." One student wrote an essay on the Negro in America that his teacher passed on. This student, who aspires to the ministry, said, "The only thing I hate is that school's just not long enough--we're just now beginning to learn."

One student summed it all up, "I have more confidence in myself than I have ever had in my life."

B. Changes in Attitudes

The statements of many of the students as expressed in the previous section are testimony of the change in attitudes which occurred during the seventeen-week period. This is not data which can be quantified or measured. However, it is real. Everyone connected with the classes was conscious of the change that occurred in attitudes, and even appearance.

In Utica, New York, the YMCA Secretary in charge of the YMCA in which the classes were held commented on the change in the way students dressed and their general deportment. Teachers commented on the change in many students from apathy and fear to confidence and spirit. These were observed but not quantified changes. Efforts to quantify such changes failed.

An attempt was made to determine changes in attitudes of the student population in regard to education, family, community, work, and the classes by using a simple check list form. On the basis of responses to the questions and the actual statements of the students during the field test, this effort was not successful. There were several problems which militated against this approach to assessing attitudes.

1. Because the students' reading levels were low, the teacher read the questions to the students and there was group discussion. As a consequence, responses by class tended to follow a pattern.

2. Despite every assurance, the students were convinced that these forms would be shared with the welfare department. They feared that unacceptable answers would cause later trouble.

It is apparent that attitudes of students could only be ascertained through individual depth interviews by a trained interviewer.

The attitude form was administered at the beginning of the field test and at the end. Although the responses were almost identical for both periods, on two questions there were more negative responses the second time.

In answer to the statement "I think this class could help me get a job," only 5 percent answered "no" the first time and 10 percent the second time.

In answer to the statement "I would take a job making less than I am now getting on welfare," roughly 55 percent said "no" the first time and about 65 percent the second time.

Whether this change was due to a change in attitude or greater freedom to speak the truth cannot be determined.

C. Student Evaluation of the Classes

Students were also asked at two different points to evaluate their classroom experience. As was true of the attitude form, students showed little change in their approval from beginning to end. Where some change was indicated, it was in the appraisal of arithmetic, social studies, the classroom and fellow students.

In California, 87 percent of the students felt the arithmetic was good at the first evaluation, and 11 percent that it was just all right. At the second evaluation only 80 percent thought it good and 17 percent just all right. In all three states less than 2 percent thought it poor.

In New Jersey and California social studies suffered a similar shift from first to second evaluation. No such change in evaluation took place in New York.

Table 49

Student Evaluations of Social Studies,
New Jersey and California (in percents)

	New Jersey		California	
Rating	Eval. 1	Eval. 2	Eval. 1	Eval. 2
Good	76	61	87	75
Just all right	23	33	12	22
Poor	1	4	1	2

In all three states students became more critical of their physical surroundings as follows:

Table 50

Student Evaluations of Physical Surroundings (in percents)

	New Jersey		New York		California	
Rating	Eval. 1	Eval. 2	Eval. 1	Eval. 2	Eval. 1	Eval. 2
Good	61	50	77	71	83	73
Just all right	29	30	20	25	14	23
Poor	10	17	3	4	3	3

At the end of the program all students were interviewed by the casework counselors to determine what the students had liked best and least in the program. The responses were open-ended, and have been tabulated. The fact, however, that a particular student did not comment about a given item does not necessarily mean that it was not important to him. Rather it means that he did not think to mention it. This is the nature of open-ended responses. Those responses which occurred most frequently are shown in Table 51.

D. A Summary Statement

Some of the successes and problems of the program are summed up by the following statement of one casework counselor:

> Thoughts in Passing...
>
> Many things pass before my mind as I reflect on the happenings of the past seventeen weeks. The excitement of the newness...the intense heat at Pyne Point Junior High at the original testing...the teachers treating the students to donuts at coffee breaks...the field trips to the museums...the expecting mothers who delivered and then quickly returned to class...the student who collapsed in class who after awakening in the hospital emergency room returned to class within two hours...the expectant mother whose water bag broke and who was taken to the hospital...she later had twins...the call to me from Mr. Van Houten asking for advice and my reply...'boil water'...the bowling league that Mr. Ricks, our counselor set up with the cooperation of the bowling alley, Avenue Lanes...the children's Christmas party conducted by the Cherry Hill High School...the wonderful reception and response from the business community...the class Christmas parties and the students singing Christmas carols...the man who tried to attend classes while his incision was still draining...the once a week community lunch that some of the teachers cooked...the 'buddy' system that was set up to help non-English speaking students...the racial harmony of the classes...the dedication of the teachers, some of whom never taught before...I could go on and on...the tears at the last interview.
>
> Yes, there have been problems, setbacks, discouragements, mistakes. There always will be. But if interest, dedication, common sense and brotherhood prevail, so will similar projects.

Table 51

Student Responses, Selected Questions from Exit Interviews

Question	Answer	Total	N.J.	N.Y.	Cal.
Most important thing gained in project	Reading	634	154	206	274
	Arithmetic	274	75	85	114
	Eng. usage (Grammar Vocabulary Pronunciation)	244	45	92	107
	Eng. skills (Spelling Writing)	378	48	129	201
	Everything	98	35	46	17
Suggestions to better program	Continue program	178	16	104	58
	Group students acc. to ability	70	-	23	47
	More Eng. skills	144	31	26	87
	More trips and movies	34	2	-	32
	No suggestions	334	112	141	81
Best experience in program	Field trips	144	26	31	87
	Reading	188	66	42	80
	Socializing	174	51	63	60
	Feeling of accomplishment	105	8	46	51
	Writing (composing letters)	81	-	41	40
	Math	102	34	40	28
	English	66	-	42	24
	Teacher	94	13	49	32
Worst experience in program	None	403	126	107	170
	Social studies	48	22	8	18
	Math	68	12	38	18
	Domestic problems	67	9	24	34

VII. TEACHERS

Based on the observation of classes and the students' responses, it was evident that the teacher was crucial in the field test. The teachers tried to understand and communicate with the students, and many were successful. Well over 90 percent of the students in evaluating their experience in the field test said that their teachers were good. In group interviews with each class, at which the teacher was not present, there was general appreciation expressed about most teachers. To a large extent students learned much from the teacher over and above reading skills. This the students could and did verbalize.

There were, as was explained earlier, three levels of teacher preparation: certified teachers, college graduates without teacher training, and high school graduates. The reason that other than fully trained and certified teachers were used in this field test was the fact that in almost every community there is a shortage of certified teachers to meet the demands of ongoing education systems. If functionally illiterate adults are to be given compensatory education, and if as is estimated there are in excess of ten million adults needing such education, there will not be a sufficient number of trained teachers available. If untrained teachers were successful, it was felt that trained, experienced adult educators could be used as supervisors and master teachers, thereby spreading their skill over a larger number of students.

In the process of screening teachers for selection it was found that there was a large reservoir of college and high school graduates to select from. Although only one state experienced difficulty in recruiting certified teachers, there was not a large reservoir to choose from in any state.

A. Teacher Recruitment

The adult educator assigned to the field test in each cooperating school district was responsible for recruiting and selecting the teachers in accordance with the criteria established by the research design. These criteria related to level of preparation, age and personal attributes only. In recruiting teachers a number of different techniques were used. In one community the local employment service was used. There were so many candidates at all three levels, the adult educator offered to share his recruits with other school districts in his county. Word of mouth was also used. In a number of cases persons who had heard about the project applied before formal recruitment began. Another source of recruitment, especially for certified teachers, was the substitute list maintained by the school district. Because the field test was of relatively short duration, women who would not have considered a full-time, year-around assignment were available. The experimental nature of the field test made it attractive and made recruitment easier.

B. Teacher Training

Teacher training followed the same pattern in all three states. All teachers were brought together for a week of preservice training. The week's training was viewed as having two purposes: (1) briefing of teachers by the research staff on the research design and the teacher's responsibility to it; and (2) training in the respective reading systems by the publishers' representatives.

The first day of orientation was given over to an explanation of the project and an examination of the testing instruments to be used for educational screening. These sessions were conducted by the research staff with the cooperation of state and local adult education and welfare personnel. The purpose of the field test, the research nature of the project and the reasons for following the project design were carefully discussed. The teachers were given a considerable amount of drill in the Gray's Oral Reading Paragraphs Test and the Vocabulary Test, so that each teacher had a minimum of two hours training.

Four days were devoted to the publishers' orientation. The publishers varied in their views of what was needed in the training period, and none fully utilized the time allowed. The Follett representative stressed the social and psychological characteristics of the population, placing little emphasis on teaching the system. This was on the theory that the teacher aid materials were self-explanatory and that any school system using the materials would not have the benefit of training by the publisher's representative. The other representatives concentrated on a thorough examination of their materials and the techniques of teaching them to functionally illiterate adults.

The teachers who felt least secure after the training were those who received a minimum of training in the content and techniques of teaching the system in which they were trained. There was general agreement among the research supervisors that all teachers in all systems would have benefited from more intensive and extensive preservice training. It was felt that much of the teacher uncertainty and frustration in the first weeks of the project could have been avoided by more thorough preservice training. It was also felt that there was a continuing need for inservice teacher training and day-to-day supervision.

C. Supervision of the Educational Program

It is important to keep in mind that since this was a field test of reading materials, the normal day-to-day supervision by educational supervisors and administrators was not present. From an educational point of view this was a serious handicap for the teachers. However, if the educational supervisor had been present, supervision would have varied in intensity and skill from school district to district. Thus it would not have been possible to determine whether administrative supervisory skill was operating to effect student gains in the reading system. To have introduced supervision would have been to introduce a nonmeasurable and indeterminate variable.

The only supervision which the teacher received was from the publisher's representative of the system she was teaching. This supervision varied widely from system to system. The AIR representative visited classes during the first month twice, and in each successive month, once. He gave extra help to all the teachers in that system. At the other extreme, no representative of Follett visited classes at all, in line with their policy as explained previously. Teachers were encouraged, however, to communicate by mail with the Follett representative if they had questions. Some teachers did take advantage of this opportunity. Publishers' representatives of the SRA and Mott materials visited some of the classes at least once or twice and also invited communication.

There was some feeling on the part of the teachers who were not visited regularly that they were being neglected. On the other hand, one teacher became resentful of the close supervision given by the AIR representative. It should be kept in mind that on the basis of either Gray's Oral or Iowa tests, there was no significant difference in gain scores by system. Thus it appears that the amount of preservice training in the use of the materials and the intensity of supervision by the publishers' representatives were not factors in effecting measurable differences in reading gains.

Although the research supervisors visited classes to observe, they were instructed to give no supervision. Their responsibility was to make certain that the design was carried out and that the teacher was following the instructions of the publisher. If any teacher was observed failing to follow the design in regard to system instruction, the research staff were instructed to report this to the adult education director for administrative action. In one case it was necessary to replace a teacher who was unable to establish rapport with her students, and hence could not communicate the instructional pattern of the system.

The great majority of teachers followed the design and the material instructions carefully. They understood and appreciated the research reasons for doing so.

In a normal teaching situation with supervision, the teacher would be able to talk to a supervisor about class groupings, slow learners, and ways to make the classes more interesting. On the basis of observation reports, it seems clear that a master teacher who would have been available to teachers could have improved the class situation and, possibly, the learning process.

D. Teacher Characteristics

Based on such gross indicators as family income level, place of residence, previous occupation and education, most teachers were from the middle-class. However, in Camden the adult educator made an effort to draw teachers from the same socio-economic class as the students. One source of recruitment was a low-income housing development, and one of the teachers he recruited was a former AFDC mother.

Most of the teachers were women in their thirties and forties who came from a wide variety of occupations and volunteer work experiences. According to the design the teachers were to be at least twenty-five years of age. However, in consultation with the research staff and on the recommendation of the adult educator responsible, some small exception was made to this rule. This was on the basis of the apparent suitability of the individual under consideration, and such judgments proved to be sound. Some of the teachers were past retirement age. A few older certified teachers who were receiving pensions and social security benefits did not complete the seventeen weeks because their earnings conflicted with the maximum allowable income.

It was observed that the retired and older former elementary teachers found it impossible to break the habit of treating students--even adults--as children. In general the research supervisors felt that teachers who were about average age or younger were more flexible and better able to establish rapport with the students quickly.

In addition to differences in the average age of the three teacher levels, there were marked differences in the racial composition: 50 percent of the high school graduates were Negro, compared to 33 percent of the certified teachers and 25 percent of the college graduates.

The characteristics of the teachers are summarized in the following table by level of teacher.

Table 52

Selected Characteristics of Teachers

Level of Teacher	Male	Female	White	Negro	Average Age
Total	14	97	69	42	38
H.S. Grad.	2	35	17	20	37
Coll. Grad.	10	25	26	9	35
Cert.	2	37	26	13	42

E. Evaluation of Teachers by Preparation Level

The adult education directors in charge endeavored to secure teachers at all three levels with the qualities of maturity, warmth, sensitivity, understanding and perceptiveness, on the theory that they could apply these traits in the teaching of adult basic education to the benefit of the students. In addition, an understanding of poverty, the family structure and of the welfare recipient and the needs and aspirations of this population was desirable. These understandings were present in some teachers and as much information in these areas as possible was included in the preservice training. It was evident, toward the end of the field test, on the basis of the statements of the teachers, that a greater understanding in this respect had been achieved by all, and especially by most of the teachers who had initially had many reservations regarding the "type" of individual who would be in the class.

In an effort to more clearly understand what qualities should be looked for in teachers for functionally illiterate adults, trained educators and reading and learning theory specialists were used to observe the classes. In addition to formal and informal class observation, they participated in informal discussions at coffee breaks, lunch, before and after class, and in brief teacher meetings.

In order to test the validity of such observation, the research personnel in each state were asked to rate the teachers. These ratings were then compared with the mean change scores of the class based on the Gray Oral test. Those teachers who were rated "best" were not necessarily those whose classes achieved the most gain, nor were those teachers rated "worst" the ones whose classes achieved the least gain. There was no correlation between gain scores and teacher rating, as can be seen in Table 53.

Even so, there were some observations related to educational theory and practice which were observed and are valid. The generalizations agreed

Table 53

"Best" and "Worst" Teachers by Rank According to Student Achievement as Measured by Gray Oral Tests, by State[a]

State	Ranks Best	Ranks Worst
New Jersey	7	9
	10	14
	22	35
	31	36
New York	1	2
	12	27
	14	25
	32	33
California	8	6
	10	11
	15	12
	33	24

[a] "Best" and "Worst" teachers were selected by field test supervisory staff from observation. Rank order was determined on basis of mean change scores.

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upon by the research staff are presented in the following section by level of teacher.

1. High School Graduates

It should not be overlooked in assessing the high school graduate teachers that this was the only level of preparation in which there were significant difference in gain scores. It has been suggested by some that this is due to the fact that the certificated teachers available for the project were not representative of certificated teachers as a group, since recruitment was done after certificated teachers were committed to other teaching positions. It must be remembered that the reason for experimenting with other levels of preparation is the fact that trained teachers are in short supply. This field test has shown that the high school graduate can achieve better results on the basis of gain scores than the certified teachers who were available.

It is important to note that the high school graduates were more likely to be Negro and younger than the certificated teacher. Whether these factors contributed to the better gain scores cannot be determined. On the basis of observation, the high school graduate could cope with a "normal" range of problems and follow the procedures of the publishers. They showed a capacity to learn, had an interest in the academic and social advancement of the undereducated adult, showed ability to relate to adults, and indicated an interest in continuing in the field of adult education.

It was observed that a few displayed a sketchy understanding of language and insecurity in the role of a teacher. There were a few who had poor pronunciation, spelling and grammar skills. Many had considerable self-confidence and good language skills. These differences in the language skills observed in high school graduates should be taken into account in recruiting.

The major observed weaknesses of the high school graduate teachers were inability to diagnose and correct teaching difficulties and the inability to attack a problem in a variety of ways. In some instances these teachers were not aware of difficulties that were beyond their capacity to alleviate, and in the process became frustrated. In addition, many needed to develop skill in simple instructional techniques of grouping, class management and academic planning for instructional purposes. As previously suggested, the availability of supervision and both preservice and continuing training would help such teachers overcome these problems.

2. College Graduates

College graduates were generally more comfortable in the relatively new situation of teaching functionally illiterate adults. They seemed to relate well to them and had enough educational background to provide answers, or knew where to go to look for answers. As a group, they appeared to be more cheerful and optimistic. They were most ready to accept the idea of adult basic education as a necessary and socially good commitment. They generally felt that education was one of the basic steps in the attack on poverty. As a group they were younger than the high school graduates and considerably younger than the certified teachers.

Their ability to accept new programs and new methods was also quite apparent. This might be predicated on the fact that they hadn't been exposed to a number of teaching systems and were quite willing to accept a system which had a logical and demonstrable base for accomplishing results. They usually had no particular educational philosophy, and therefore could accept any system easily.

College graduates, as a group, were extremely sensitive to the needs of the adults in their classes. They became personally involved and tried to help their students solve their problems or make adjustments to them.

3. Certified Teachers

The certified teachers generally showed the greatest ability in planning classroom organization and grouping initially. Since most of these teachers held elementary certification, their training and experience has been with children. Some, therefore, had difficulty in relating to an adult learner population. These had a tendency to teach down to their students and somehow regard them as grown-up children who needed remedial work because they did not make out too well the first time around. This finding has considerable implication for the training of teachers for adult basic education. There were very few teachers in the field test who had experience with adults, and only one who had any training in adult basic education. It is imperative that adult education be given more emphasis if the problems of the adult learner are to be dealt with in basic education.

Most certified teachers had been exposed to a system, or "THE system," and had developed standards as to what constituted teaching and lesson preparation. Their approach to materials was influenced by their commitment to basal readers and/or workbooks, and some had blind spots in selecting supplementary materials for adult usage.

The certified teachers were basically better equipped to handle the normal frustrations which occurred in teaching functionally illiterate adults. They had the patience to adhere to systematic repetitive drill and were innovative in selecting different approaches to the same material. Their training in teaching basic language skills appeared to be a strong factor in unlocking, for the adults, the complexities of learning to read.

F. Summary

A very important finding is the fact that the ability of the teacher to communicate with the students affected the total class morale. In only a very few instances the teacher was not able to communicate with the students. In one case it was the result of the teacher scolding the students, holding poor achievers up to ridicule and referring to the students as "them." In this class the students rebelled. Fortunately this was atypical. Typically the teacher was able to communicate and even win the affection of the students as one adult to another. Fifteen percent of the students said the teacher was the best thing that happened to them in the entire seventeen weeks.

It is important to note that many of the teachers were in effect volunteers. A number of the teachers including certified teachers were persons who were attracted to the field test because it was experimental. Some were interested because of general interest in poverty programs. Many persons applied for teaching positions in the field test because they had read about it in the newspapers or heard about it from friends and their interest was stimulated. Although it cannot be determined exactly how many were thus attracted, there is evidence that persons interested in the new and different were most likely to apply.

It is a fact that for almost all teachers the contact with their students brought about a reinforced or new appreciation of the problems and potentials of those who have had to live with little hope, and less money, on the sufferance of taxpayers. Numbers of these teachers now plan to make adult basic education their life work. All of them may become valuable in helping communities to understand and act on the problem.

From observation there is strong evidence that preservice and more especially inservice training and supervision are paramount requirements. This would be particularly true in programs free of the limitations imposed by this field test, with its rigid adherence to assigned text materials and publishers' instructions. It would then be possible for the teacher to be more creative and to introduce additional materials and methods. Research supervisors have strongly expressed themselves as favoring such freedom if maximum education is to take place. Indeed, they have stated that they have little doubt that considerably greater gains--in literacy and in broader education--could have been made had they been free to counsel teachers during or after their class visits. There is no evidence on the basis of the quantitative data that would support this conclusion.

There were differences among the four reading systems in the degree to which the research design imposed rigid controls upon the teacher. Two systems were largely self-contained and did not encourage the teacher to use supplementary materials and experiment. However, the other two systems gave the teacher much more latitude. Both the Mott and Follett systems encouraged the teacher to introduce other materials and use various teaching methods. It could have been expected that in using their materials the trained experienced teacher would have been most successful. However, on the basis of gain scores there was no significant difference within these systems by level of teacher. All systems, except one, encouraged the teachers to group students according to level of attainment. On the basis of observation the certificated teacher was most competent in grouping. However, this had no effect on the rate of learning.

One conclusion about teacher background and training for adult basic education that can be established from the experience of the field test seems to focus on certification. It has been indicated in many ways that present elementary certification does not equip a person to teach adult basic education any better than an uncertified person. In fact, every category of teacher preparation was successful to a degree, and all could have used more intensive preservice and inservice training to enable them to perform more successfully.

In view of the present dearth of properly certified teachers to educate many millions of functionally illiterate persons, and in order to set minimum standards of preparation for subprofessional teachers to be drawn from the ranks of high school graduates and others, another category of certification is needed. Active research should be initiated to evolve courses at the college level for qualified subprofessionals interested in teaching adult basic education. A special certification in adult basic education would be the end product of these courses.

It is a striking thing to see how generally the observers agreed that the personality and attitudes of the teacher and her ability to relate to her students as individuals were the key elements in making learning an exciting experience. How to select persons with the requisite personality and attitudes has not been answered in this field test. It is an area needing further research and study.

VIII. THE FOUR READING SYSTEMS

There were a number of criteria for selecting the four reading systems to be used in the field test. In considering a given reading system the claims of the publishers were accepted verbatim. These claims were compared with the criteria, and if a system met the criteria it was considered for the field test.

It is important to reiterate, however, that there were few reading systems to choose from. In fact, when the field test was begun in New Jersey in August 1965, only two reading systems which met the criteria were available. In other words the four systems were not those which were selected from a wide range of choices, but were the only ones which approximated the criteria.

It is also important to note that there were other systems on the market which were either too costly, could not be adapted to use by an untrained teacher, or required extensive preservice training, and these did not meet the criteria. Furthermore, since the field test was begun, several other reading systems for functionally illiterate adults have come on the market. The reading systems used in this field test are also being changed by several of the publishers. Therefore, it should be kept in mind that what is reported in this chapter relates to the systems as they were during the field test.

This chapter is in two parts, the first is an evaluation of the four systems in relation to the criteria of the research design, and the second is a descriptive analysis of each of the four systems.

A. The Reading Systems Evaluated on the Basis of the Research Criteria

1. Criterion One: To teach functionally illiterate individuals to read in the shortest possible time.

Each of the reading systems used by the different levels of teachers was successful in increasing the reading ability of most of the adults in the program. A small percentage, about 15 percent, of the students were successful in achieving an eighth-grade or higher reading level during the 207 hours of reading instruction.

A few students made little or no progress, but the majority of the students were reading and comprehending at about the fifth-grade reading level according to tests administered during the project. A final testing of students indicated that on an average they had achieved about one and a half to two years progress in reading ability during the seventeen weeks of the program, depending on the test used.

In some of the classes using AIR and SRA materials the class completed all of the lessons before the end of the seventeen weeks. However, when the gain scores of these classes are compared with those which did not complete the materials there is no significant difference. Both AIR and SRA introduced additional material during the field test in order that the systems would be richer and fuller.

It can be said categorically that none of the systems tested had an advantage over any other in helping students improve literacy quickly. All were equal in raising the literacy level in a comparable period of time.

The most important accomplishment, however, was the student's discovery, through his total education experience, that he was capable of learning. This contributed significantly to an increase in self-respect and aspiration.

2. Criterion Two: To improve the ability of functionally illiterate individuals to qualify for occupational training or for available job opportunities.

There was no difference among the systems in their effectiveness in improving the ability of functionally illiterate individuals to qualify for occupational training or for available job opportunities. A few persons did accept jobs during the program, but there is no evidence that would indicate any reading system or the program was responsible. Those persons who attained the eighth-grade level could qualify for most training programs. However, there was no difference between systems in relation to the number who attained the eighth-grade reading level. Although some jobs are open to students reading at the eighth-grade level, most jobs require a high school certificate, or the equivalent. Many jobs require the applicant to pass a written test. On the basis of job opportunity data provided by welfare departments, few jobs are open to persons with less than high school. None of these systems purported to take students that far.

In every community many students continued basic education, went into jobs or job-training activities at the end of the field test. Although it cannot be said that any particular system was responsible, the disciplines and skills learned in the total educational environment fostered a desire among the participants to learn more and, for many, to become independent.

In regard to specific material oriented to the world of work, only the Mott and Follett systems had any material related to employment and employment applications. Some students commented on the fact that filling out an application was a good experience. However, neither system had a well thought out and systematic approach to the world of work.

In the final analysis, very few students really improved their qualifications for employment or job training, even if an eighth-grade reading level is used as the criteria regardless of the reading system. To be effective in helping functionally illiterate persons move toward the world of work, the reading systems need to help students learn how to take employment tests, contain information about kinds and types of job opportunities and be more extensive.

3. Criterion Three: To enhance the ability of functionally illiterate individuals to better meet their adult responsibilities.

No reading system fulfilled this criterion. However, the project itself in which the teachers and the materials jointly involved the students in an educational experience effected change in individual students. The experience generated positive attitudes related to education, citizenship, voting and vocational aspirations. The students' horizons were extended and a high level of motivation was achieved.

The experience gained gave them greater insight into problems affecting their own lives, as well as their families. It enabled them to discuss their problems and interact with others who had similar problems. It opened avenues and explored resources they had been unacquainted with, and many of them acted for the first time in using these avenues and resources.

4. Criterion Four: To identify those learning systems that have a high degree of teachability calling for the least possible skill on the part of teachers and the capacity to withstand poor teaching.

Each of the reading programs had a different approach to teaching, but each could be used by all the teachers regardless of level of preparation. However, the AIR system required the least amount of preservice training.

The formularized aspects of AIR, including the unvaried, simple pattern of instruction, made it relatively easy for all levels of teachers to grasp and retain. The SRA system had an excellent guide and planned outline for all lessons, but technical complexities involved in its teaching called for more training and demonstration teaching.

The Mott and Follett systems also provided good guidelines for teaching their materials. In addition, they encourage variation, flexibility and individual acceleration. This proved to be more than some of the teachers could handle.

AIR made no provision for individualized or varied group instruction. All students were forced to remain on the same level throughout the field test. Although this made it easier for the teacher, it created problems for the student who did not fit into the grouping at any particular time.

The Mott and Follett systems which indicated heterogeneous progress in their systems, therefore varied group teaching, did not really provide the necessary instruction in this sophisticated teaching skill. SRA, which through its programmed elements encourages individual progress and indicated in its teachers' guides how to provide for this aspect of teaching, had many varied types of heterogeneous activities going on in its classes. But the teachers were not able to handle this nuance with any degree of skill. A great deal of time was consumed in waiting for the teacher to check the work or get through with one of the other groups.

Problems regarding administrative procedures and objectives appeared to be a concern of teachers of all systems. Other types of problems directly related to teaching were as varied as the individual teachers. As to the difference in levels of preparation, it was notable that the certified teacher was not always recognized by the observer, and in some cases could not be identified as such, even after several visits, without first referring to the roster. There appeared to be very little difference among the reading programs in their capacity to be useful in the hands of teachers of different educational backgrounds and experiences.

All of the systems withstood poor teaching. That is, regardless of teacher skill, about the same percent of students in all classes and in all systems made progress. It is not possible to guess whether increased gain would have resulted had teachers been more skillful. However, based on the evidence of gain scores, the teacher skill is not the primary factor in achieving reading gains.

5. Criterion Five: To ascertain the extent to which the learning system is flexible in its entry level because it can accommodate learners at different levels of literacy and different educational backgrounds.

The systems were not very flexible in their entry level, at least within the limits of the experimental design for the program. Some of the teachers in AIR sent phonics records home with students entering late, and some students were isolated in the room for independent study at times; but the general procedure was to keep all students together regardless of beginning level or rate of progress.

SRA lends itself to independent study and grouping, and most teachers tried to use this procedure. But it was apparent that the teachers needed much more practice and instruction to use the system effectively. Some students were observed waiting for the teacher to check the Instructor Qualification Box so that they could proceed, and other students were observed interrupting the teacher without consideration for the student or group being assisted. It appeared difficult for the teachers to coordinate their time with groups and individuals.

The Mott and Follett materials were used in small groups or individually at times, and some students were observed assisting other students; but the general procedure observed was for the teacher to keep the class together. Neither Mott nor Follett systems were designed to take students at different entry periods. The representatives of these two publishers registered dissatisfaction with the plan to allow new persons to enter the class during the first twenty days.

6. Criterion Six: To assess the extent to which the learning system provides a high level of interest and can hold learners.

Enthusiasm and interest were observed in all classes of all systems, regardless of teacher level. No one system stood out in this respect, nor can these factors be traced to any single feature of the field test. It was rather a combination of teacher enthusiasm, group solidarity and good supportive services underpinning the educational process.

Students came to class for a variety of reasons: interest, desire to get out of their homes, desire to meet in a social setting, ambition, possible economic improvement, welfare department pressure, loyalty to class and teacher, and many others. When they failed to attend, it was for as many negative reasons.

No one system had a better attendance record than another; nor can it be established that any one of the systems had more power to hold its learners than any other.

7. Criterion Seven: To determine the extent to which the system is operationally feasible.

According to the design, the operational aspects of the reading programs were to be considered in relation to cost data, relationship of costs to speed and level of achievement, and leadership and administration of basic education programs. The cost of student materials and teachers' manuals are shown in Table 54. This table shows the cost of the materials for the first use during the research project, but not for a second, third or fourth use. The AIR materials may be re-used, and by re-use the cost per student in the second class would be $1.00 only. However, a record player is required, and this cost was not included as a part of the initial cost per student because some school districts used existing record players and other districts purchased or rented record players at different prices.

The Follett materials were used as expendable materials in the program, but they could very easily be adapted for re-use. Thus, there would be no cost for a second and possibly a third use.

The SRA and Mott materials are expendable, except for the teacher's books, and a second class for SRA would cost $11.35 per student. For Mott the cost would be $11.80 per student.

The cost data show that the cost of the materials ranged from a low of $5.58 for the Follett materials per student to a high of $12.68 per student for SRA. AIR, however, cost $10.77 per student, and the expense of a record player as stated previously was not computed as a part of student cost.

Even though a dictionary was not required by the publishers, the teachers in all systems found that it was a great necessity, and one was purchased for each student, or each student was directed to purchase his own. In addition, the Spanish-speaking students usually resorted to a Spanish-English dictionary which was most necessary, unless the teacher or one of the students could serve as an interpreter.

8. Criterion Eight: To ascertain the extent to which the learning system contributes to a positive educational and social experience for the learner.

Although no one particular reading system contributed more than another to a positive educational and social experience for the learner, these positive

Table 54

Costs of Reading Systems, By System

System	Cost	
American Incentive to Read (AIR)		
"Learning to Read and Spell," Bk. 1, Bk. 2	per set	$ 7.00
SPACE Tests	per test	.50
Diagnostic Evaluation Material Set	per set	.50
Examiner's copies - SPACE Tests	per copy	1.00
Scoring keys - SPACE Tests	per key	1.00
Teacher's Kit	per kit	39.50
COST PER STUDENT - Class of 15		10.77
Science Research Associates, Inc. (SRA)		
"Reading in High Gear" : Cycle I - 4 books		
Cycle II - 2 books		
Cycle III - 2 books	per set	$11.35
Teacher's Manual - Set of 2	per set	20.00
COST PER STUDENT - Class of 15		12.68
Allied Education Council (Mott)		
"The Mott Basic Language Skills Program"		
Basic Language Skills 300A		$ 1.55
Basic Language Skills 300B		1.75
Word Bank 300		2.05
Basic Language Skills 600A		2.25
Basic Language Skills 600B		2.25
Basic Language Skills 900A		1.95
Teaching Adults to Read 1500		1.55
COST PER STUDENT - Class of 15		11.85
Follett Publishing Company (Follett)		
"Systems for Success"		
Book I		$ 2.49
Book II		2.49
Instructor's Book I		4.50
Instructor's Book II		4.50
COST PER STUDENT - Class of 15		5.58

effects became increasingly observable in many classes. With few exceptions, students endorsed the social and learning experience in which they had been involved. The overwhelming majority expressed a desire to continue their education. A fine rapport existed in most classes, and students took an interest in each other and helped one another. They indicated during interviews a strong desire to learn more content material in areas they thought would be valuable and interesting to them.

Many students increased their reading ability to the extent that they read newspapers and magazines for the first time and wrote and spoke more effectively. Also discerned were a growing sense of responsibility, improved ability in making decisions, and a marked increase in motivation to achieve. The research project served as a means of involving the students in a positive academic and social experience that brought them into contact with many economic, social and political realities that they had not previously understood.

The understandings and knowledge gained by the students served to increase their capacity to assist their children and to help themselves gain a greater perception of their own abilities.

In conclusion it can be stated categorically that in terms of reading gains there is little to choose from among the systems. When specific criteria are applied, although the systems differ, there is little quantitative data which can be used to say one system was better than another. All need improvement, but all are effective in teaching the functionally illiterate adult to read and improve his social understanding.

B. Descriptive Evaluation, System by System

This evaluation of the learning systems includes a description of their component parts, some content analysis, a consideration in terms of acceptable criteria for adult learners and a survey of observed strengths and weaknesses, including recommendations for improvements.

1. AIR -American Incentive to Read, authored by Benjamin H. Neiden. published by American Incentive to Read, 2015 West Olympic Boulevard, Los Angeles, California 90006.

The AIR system is basically a controlled phonics course which teaches the fundamentals of reading sounds and spelling rules. It was not exclusively developed for adults. "The course provides a simple, straightforward system for helping children, teen-agers or adults to read more quickly, more easily and with instant understanding."

It consists of two student and a teacher's manual with step-by-step procedures for each lesson. In addition, there are phonograph records for emphasizing correct pronunciation and testing spelling. At various intervals, tests are given to determine progress. There are supplementary materials which are made up of families of words, that is, more difficult words than appear in the text. The books have large, primer-type print on heavy, good quality paper. No provision for writing in the books is made and all writing exercises must be done in the students' own notebooks. The art work consists of line drawings which are simple and rather childish in quality. They are typical of drawings found in children's books of poor quality.

A good deal of thought was given to the phonic sequence, introduction of sounds, control of essential vocabulary, overlearning and drill. These elements are educationally sound, and with the exception of the introduction of consonants in strictly alphabetical order, not at variance with commonly accepted phonic teaching and thinking. For example, the short vowels are introduced first with initial consonants, and then with final consonants. Words which deviate from regular sound patterns which are needed for sentence composition are introduced as sight words. Endings are phased in, followed by sounds of c, g, k, q, and x, and then the consonant blends. The long vowels are brought in with all of the consonants, followed by diphthongs and digraphs. Other endings, syllabication, prefixes and suffixes and different combinations of letters producing the same sound finally complete the text.

The teacher's manual is a step-by-step, lesson-by-lesson guide to the text. It presents a formula for teaching each lesson. It is manifestly clear and simple. Teaching this system calls for little skill on the part of the instructor.

In actual class use there is a great deal of emphasis on choral sounding and correct spelling. No provision is made for individual differences in rate of learning. All students move through the texts at the same time, making entry level inflexible.

In terms of acceptable criteria for adults, we must consider the materials for style, format and content. The AIR system is strictly limited to teaching phonic reading skills. It makes no attempt to go beyond the bare outlines of producing independence in word attack. Its style is unimaginative, unmotivated, without adult interest. It has obviously more validity as a system for teaching children to read. Its format, with large primer type and line drawings could not be mistaken for an adult book, and it has very little reading material of a comprehensive nature. This is strictly limited at the beginning to short sentences, and in later chapters to short paragraphs.

Some examples follow:

> Book I, page 43
>
> > Ned said, "I want a red jet." "Tell dad," said Ted. "Dad will get you a set of ten red jets."
>
> Book I, page 151
>
> > The cat will snatch the snuff and sniff it. He will snap back and not snitch it again! Then he will lie in his bed as snug as a bug in a rug. "Purr, Purr," he will say. " I hit a snag. No more snuff for me!"
>
> Book II, page 315
>
> > Mable said she could mangle by candlelight. "It is as simple as the dimple on your face," she said to her uncle. I can also use our table for needle work. Some people grumble about doing house work, but Mable likes every single bit of it. She must have been born to it from the cradle!
>
> Book II, page 367
>
> > The "tough" boy in the neighborhood cried "enough" when a tougher boy came along. The tough boy was rough but the tougher boy was rougher. The lesson to be learned is that it is better to be a kind boy than a tough one! Everyone likes a gentleman rather than a "toughie." This is no laughing matter, so cease your laughter.

Adults would hardly be motivated to read by the above materials. The author is merely working through a phonic scheme attempting to get maximum recitation of particular sounds, but little attempt is made to integrate adult themes.

Another weakness of the system is the absence of materials to promote comprehension. Reading is not merely sounding out words. It also includes the various relationships between words in sustained expression and the meanings of these relationships in context. There was little in the content to promote discussion or extend the horizons of the readers. By inspection, the reading material doesn't seem to go very much above a fifth-grade level. A person may gain independence in word analysis skills through this system, and be able to sound out most new words without help, but he may not understand what he is reading. The system does not lend itself to the accommodation of non-English speaking persons beyond actually learning standard pronunciation of English sounds. Neither does it allow for heterogeneity in a classroom.

The element of choral sounding had the effect of unifying the class and lending confidence to the poorest readers. It gave them a chance to participate and feel that they were learning along with the better readers. Undoubtedly, better speech patterns were developed by this method.

The essential weakness in choral sounding is that it requires a highly trained ear to distinguish individual error. The teachers were not uniformly capable of detecting such error. There is also the danger of assuming that if the whole class response sounds correct, everyone has learned a particular sound or blend correctly. This was not borne out by observation of the AIR classes. Many students had not developed independence in short and long vowels and blends late in the program.

The better readers who had basic phonic skills were compelled to remain with the nonreaders and poor readers for a considerable period of time until some homogeneity had been achieved. In some instances, the good reader was never challenged to go beyond his entry reading level.

Some of the research staff felt the system does have validity for special small group instruction where the emphasis would be particularly aural in nature. Some of the research staff felt that the AIR materials were good within the limits of their objectives. That is, they did well what they were designed to do.

2. SRA - Reading in High Gear - The Accelerated Progressive Choice Reading Program, authored by Myron Woolman, Ph. D. and published by Science Research Associates, Inc., 259 East Erie Street, Chicago, Illinois 60611.

Reading in High Gear is a highly structured, semi-programmed, phonic reading system based on two primary principles: 1) discrimination--that is, dissimilarity of sequential materials to avoid confusion, and 2) variance--limitation of the number of responses to what is being taught. The psychological rationale is that short, simple, different units are easily digestible. Also, by limiting the number of possible responses, greater likelihood of success is insured. This provides motivation and encouragement to continue.

The process used in developing reading skills from the known speech level to the recognition-understanding level has five steps: 1) the audial meaning level--understanding of words in oral context; 2) discrimination level--distinguishing differences among letter shapes; 3) identification level--identifying letter shapes with letter sounds; 4) compounding level--demonstrating ability to write correct sequences of letters into sound units, then words; 5) visual meaning--reading and writing stage, indicating that meaning is known and recognition is present.

The program consists of four teachers' manuals and eight students' workbooks. The teachers' manuals are explicit and highly detailed as to motivation, procedures, instructional suggestions, anticipated responses and corrective measures. Although the process does not require any high degree of teaching skill, definite procedural skills and a highly organized individual are required to teach this system.

In the first four workbooks all the letters are introduced with the exception of q. Upper case printing is used for writing, and phonemic combinations with short vowel sounds are used before words are introduced. The system is controlled so that no words are used which do not contain letters already learned. Words necessary for sentence construction which do not follow this pattern are introduced as sight words. In the second two workbooks, printing of lower case letters is taught. The letter q, consistent compounds, the long vowels and grammatical rules for punctuation and capitalization are included. The third two workbooks deal with variant sounds, compounds, diphthongs, compound words, dictionary usage, syllabication and cursive reading and writing.

In each segment, there are check-out tests designed to test the student's understanding of material. If the student fails to pass these, he is sent back for further review until he can. One objectionable feature about the tests in the workbook is that answers appear on the next page, encouraging copying. The instructor is not always able to watch students, and on many occasions students were observed copying answers rather than working them out.

At the end of the first four workbooks, a student helper exam is given to encourage status and check understanding. Those who receive 100 percent are permitted to help other students, under the instructor's guidance. Those who do not achieve perfect scores are sent back to review weak areas until they can pass another version of the same test. There are final check-out tests at the end of the next two cycles, and likewise, helper categories are assigned to those who make perfect scores on their first attempt.

The material for reading employs words which have been learned in preceding segments of each cycle. The vocabulary is highly controlled. But the content, especially in the first two cycles, is heavily weighted in favor of male teen-age argot, with the emphasis on action stories involving bandits, robberies, cars, drag racing, etc. Their construction consists of short, choppy sentences, using regional slang. Although the effect may have some interest for a teen-ager, it is not appealing to the adult. He uses slang, but he doesn't talk the way these stories are written.

Example: Learner's Workbook, Cycle II, Segment I, page 10.

> Tom HAD a JOB AND, at LAST, Tom HAD LOTS OF FUNDS. Tom GOT a HOT ROD, AND HAD a BLAST. Tom GOT HUB CAPS AND a FAN FROM a TRAMP at a DUMP. Tom's HOT ROD, "DOLL," HAS LOTS OF RUST AND Tom SCRUBS AND SCRUBS. A HOT ROD CAN RUN FAST AND Tom's RAN as FAST as BOB'S. Tom PUT BOB ON, "JUST a FUN DRAG, MAN...." BOB NODS, "CUT, MAN" AND JUMPS UP. BOB AND Tom BLAST OFF. BOB BATS PAST Tom AND "DOLL" JUST JOGS - PUT, PUT, PUT. BOB GOT MAD "DRAG, MAN, DRAG!" "DOLL" BLASTS OFF PAST BOB. BOB JUST GASPS, "Tom's HOT ROD, 'DOLL' HAS GUTS, MAN. Tom HAS GUTS, BUT Tom ACTS NUTS."

Slang or popular expressions need not be totally avoided, but they should be in proportion and somehow related to adult experiences.

There are several other objectionable features of the SRA books. The paper is of poor quality, similar to that of a newspaper. The print on the opposite side of pages can be seen through the paper. It is difficult to erase when errors are made. The line drawings are poor and juvenile in character. The use of photographs would make a substantial improvement.

There is no doubt that the programmed nature of this system can be quite successful in teaching adults how to read and comprehend what they are reading, provided they are willing to stick through the formularized lesson patterns and learn the circling, underlining and insertion procedures. This may be novel and interesting to begin with, but it can become quite routine. Adults respond to personalized attention, encouragement, interaction and personality factors. In this system, there is a tendency for the teacher to abdicate and permit the material to take over. Through observation, too many instances were noted of students working by themselves for long periods of time while the teacher waited for the completion of the check-out tests.

The programmed nature of the material makes it mandatory that everyone start at the beginning in the first segment. This means that you can't have any heterogeneous grouping in a class to begin with. It is assumed that everyone either can't read at all, or reads so poorly that he must go back to the very beginning of the program. In the case of some students in the field test classes who were reading at third- or fourth-grade level, the first cycle and a good part of the second was wasted on them, since they could not enter at a level commensurate with their skills. Non-English speaking students were not serviced in any special way by this system.

There is a high motivational feature to the progressive choice system. It permits the individual learner to progress at his own rate and immediately points out the weaknesses in his own pattern of understanding, permitting him to reinforce these weaknesses with review work.

Grouping should and does occur as a natural consequence of the varying abilities of the students, but the teachers' manuals make little provision, aside from the student helper, assistant student instructor and student instructor categories, to reinforce and aid in group learning. Theoretically these assists are fine, but in actual practice the teachers were not able to cope with the mechanics of the process.

3. Mott - The Mott Basic Language Skills Program, authored by Byron E. Chapman and Louis Schultz, published by Allied Education Council, 117 Grant Street, South, Galien, Michigan 49113.

The Mott Basic Language Skills Program uses a sequential series of texts which approximate the beginner's reading level through twelfth grade. Reading I, which contains Books 300A and 300B plus a Vocabulary Word Bank Book, is intended to take the student through third-grade level. Reading II, consisting of books 600A and 600B, is constructed to bring the student to sixth-grade level. Materials designed to take students beyond this level were reached by only a few classes in the field test and were not considered in this evaluation.

Each text has fifteen lessons, each to be covered in four hours, or approximately sixty hours for the entire text. Series 300A and 300B, arranged in approximately the same fashion, and using a strong phonic approach, cover all the phonic elements, including visual discrimination, sound discrimination, classification, sight word skills, some language development and writing of sentences. The phonic elements are illustrated by appropriate photographs, identifying the given sound in both upper and lower case print and script. At the very end of the 300 Series books, there is some reading experience of a longer nature and models of forms such as employment, applications for bank loans and blank checks to be filled in. A list of the total vocabulary used in each book is also appended. The supplementary Word Bank is a picture text consisting of photographs of common objects, identified for vocabulary purposes in both upper and lower case print with definition through sentence usage, and with space provided for practice copying by the student. The page composite is then used for differentiation and word recognition, and writing experiences with the new words. Twenty-five new words are learned in this way. At the end of each unit, students are asked to identify the picture objects and spell the words which identify them. Each unit closes with a reading exercise containing the words learned in the unit. Three hundred new words are learned in this fashion. Spelling tests are also included as part of the materials and an alphabetized list of all words used in the Word Bank is appended.

The 300 Series books do a rather thorough job of covering basic phonic skills, providing enough practice exercise to insure mastery of material. The work is carefully sequenced and no words are used whose phonic elements have not already been studied. The short sentences used to reinforce the learning of phonic elements, for example, short o: "Bob got the mop," are not exactly reading experiences, but are valid for their purpose. This short, choppy approach could be ameliorated by the use of short paragraphs built around a central theme, incorporating this phonic element and others learned before.

There are many worthwhile learning exercises built into the text, such as choosing appropriate words, adding endings, writing examples and simple rules. The directions are simple and clear and the format is adult enough not to confuse the books with children's materials.

The two books in the 600 Series follow a similar pattern of fifteen lessons each of four hours duration. The content of each unit deals with a specific skill such as word building via prefixes and suffixes, dictionary skills or syllabication, followed by a long reading article, a spelling exercise, word study, a suggested composition for homework and a group of everyday words related to a specific activity or theme. In addition to language exercises, there are lessons in Book 600B dealing with commercial forms, bank forms, maps and graphs and reference and library skills.

There are some questionable elements in this 600 Series. The word study exercises are done completely without context so that they are to be learned by rote. The selection of words in terms of their usefulness to adult students appears to be quite arbitrary. Words such as douse, homage, ebony, hocus-pocus, parable, annotate, relic,are hardly common usage words an adult will need in everyday life.

The overall selection of reading materials is fairly good and varied, although the appeal is mainly to male students. A number of stories,though, adopt a rather unctious, moralistic tone which students have found objectionable, in some cases refusing to go over them in class.

Each series of books has a short teacher's manual which includes many useful tips on teaching the units and valuable assistance in setting up a learning relation with the class. A larger instructor's manual, Series 1500, Teaching Adults to Read, is an excellent handbook for teachers of adult education. It contains valuable information on teaching adults, testing, diagnosing, methods of teaching phonic elements, plus a graded reading bibliography and sound reference materials.

In summary, the material is adult-oriented, skillfully organized and fairly straightforward in its exposition. The quality of paper used is just fair and the print is clear, but sometimes erratically spaced, indicating rather hasty editing. It seems to lack uniformity of appearance, but this may be due to revisions.

Although the author indicates that no high degree of teaching skill is needed to teach the series, quite a bit of sophistication is required in order to carry a heterogeneous class group along at different levels, ascertain their progress and do remediation work with them. Teacher training of an intensive nature is highly recommended if the materials are to be used to their full potential.

Although outside reading of other supplementary materials is suggested for reinforcing reading skills, in actual practice, teachers did not have sufficient time to do this within the time allotted for the field test.

Many students had difficulty with and resented the unit composition. Much of this resentment was caused by the absence of a learning experience which would make composition meaningful to them. There were no guide lessons in the 600 Series on compositional aspects, such as organization of material, outlining and summarizing techniques. Their inclusion would have had validity for encouraging more fruitful writing experiences.

4. Follett - Systems for Success, Book I, Revised, and Book II, authored by R. Lee Henney, Ph. D., published by Follett Publishing Company, 1010 West Washington Boulevard, Chicago, Illinois 60607.

The reading program in Book I, Systems for Success, is basically a phonic system, built on word families--that is, words containing similar sounding phonic elements, incorporating a vowel sound, or vowel combination, preceded by consonants or consonant blends. There are forty-two phonic charts, including progressive reviews of material already learned. These are interspersed with spelling exercises, handwriting charts, twenty-four arithmetic lessons and six English lessons at given periods suggested by the author. The book is designed to bring students to fourth-grade reading level.

The material is essentially adult in nature, dealing with cars, dating, jobs, sports and human interest, and the reading passages are short to begin with, growing longer as the student progresses in the book. The material is simple prose and male-oriented. There is little here for the female student.

The phonics charts begin with an exploration of the alphabet in both upper and lower cases. Consonant sounds and both long and short vowels are introduced at the same time. This practice is highly questionable since it leads to a great deal of confusion for the student beginning to read. The very next chart catapults into the consonant blends.

The phonic patterns are introduced too quickly, and it is doubtful whether students can absorb so many new sounds and words at the same time. There is not enough practice material on individual sounds to guarantee that they will be learned. In the spelling sections, the student is given regular spelling tests of twenty words. Again, this appears to be too much of a bite at one time. In actual practice, as observed in many classes, students had not mastered the sounds and were floundering in spelling. Reading also was marred by many errors because of uncertainty. Many of the sounds were learned by rote in group sounding, but fixation had not taken place.

The author's introduction to the material in Book I is carefully detailed and interesting. His advice is simple and clear. There are many good suggestions for the teacher in regard to teaching adults and suggestions for sequential teaching. It is also interesting to note that the author does not rely entirely upon his system for reading material, but suggests outside reading, including newspapers, magazines and books. A suggested list is given at the end of the book. The author also advocates varying the pattern of teaching in order to break down the sameness which would result from teaching the sequence in each lesson as it appears.

In addition, the author suggests the building of a learning team so that students may help each other. This is admirable, but in practice very little of this was observed. It is interesting to see that the author suggests entry level into the materials at the point where the majority of the class can begin. It is possible to do this, but it involves more than having the "learning team" help each other. It requires skillful analysis of students' abilities, and training in group work for the teacher.

Teachers were not, in general, able to cope with some of the refinements suggested by the author. There was little evidence of students working to advance as rapidly as possible or helping others who were not up to the work. Teachers were generally too inexperienced to be able to judge when maximum learning had taken place, when reteaching was necessary, or when to go on to the next lesson. They needed guidance, but this was not given. Aside from some communication by mail with the teachers, there was no supervision of instruction by the publisher. Teachers' questions such as: Am I going too slowly or too quickly? How can I help this student who hasn't learned to differentiate the sounds, or to spell the words? What do I do about non-English speaking students?--were left unanswered.

The arithmetic lessons were simple in detail and clear in their instructional pattern. Teachers commented favorably about these. The English lessons were also concise and valuable.

There is much to be recommended in these texts. The print is clear and well spaced on good quality white paper. There are writing exercises and opportunities for spelling and keeping records of written work made available. The material is essentially adult in nature and not objectionable as is the case in many lower grade materials presumably written for adults. The author's guidance and suggestions are very helpful to the teacher.

There are also many drawbacks. There is no pictorial or graphic material to assist the student, especially the non-English speaking student. Too much is attempted in each lesson, and too many new concepts are introduced at once. Not enough differentiation is made in lessons so that skills may be learned in isolation and mastery attained. Too much is left to the teacher's judgment in relation to tempo, coverage, grouping and remediation.

The second book of the series has a similar organization: twenty-eight reading lessons, interspersed with seventeen arithmetic lessons and eight English lessons, designed to bring students to eighth-grade level. The reading passages are factual, covering a wide variety of subjects, including geography, economics, citizenship, health, biography, safety and science, and range in length from approximately 100 words at the beginning to over 200 words at the end of the book. The prose is typical of workbook materials, with a stated main idea and supporting details. There is nothing objectionable about the material. It is sufficiently adult and matter-of-fact in tone, but it is unvaried in style. It would be valuable to use supplementary materials such as newspapers, magazines, legal notices and others. It would also be worthwhile to have students gain some experience with popular songs, poetry, ballads and colloquialisms.

In the teaching of the reading lessons, there is an unvarying pattern and an unvaried series of questions to answer: a main idea question, four detail questions and ten vocabulary usage questions. These have a certain value in checking comprehension, but their sameness as a steady diet is not recommended. A series of differentiated activities, including applications of learning, dictionary skills, outlining skills, summarizing skills, location skills, discriminating between fact and opinion, making judgments, etc., would make reading activities much more interesting and valuable. Reading is essentially a tool subject, and it should be used in connection with the various skills a person will need in coping with the demands of society.

Another deficiency is the plethora of new words introduced with each reading passage. Between sixteen and twenty-six new words were provided. This amounts to approximately 15 percent of the total article. It is highly unlikely that a person can master the meanings of these new words in one lesson, much less their spelling, which is also contained in the same lesson.

The arithmetic work is in good sequence, well delineated and explored and in sufficient quantity to provide enough practice. The English activities are practical and functional, including emphasis on punctuation, capitalization, letter writing, and the reading and filling in of job applications.

None of the classes was able to finish the second book within the period of the field test. Some teachers used Book II at the same time they used Book I; others used Book I until it was completed. There seemed to be no consensus about how to use the materials.

There is much to be said for the integration of subject area materials in a basic learning system text as it is presented in the Follett Series. The incorporation of mathematics and principles of grammar ties together several disciplines which have a tendency to reinforce reading skills and point up their value as a tool subject. The functionally illiterate adult has multiple literacy needs which cannot be satisfied by mere attention to word attack skills and central reading experiences. Meaningful subject areas, including mathematics, especially problem solving, reading of charts, graphs and measurements are of equal importance in total aim of a literacy program.

IX. TESTING MATERIALS

A vital part of the field test involved the use of testing to measure change and progress. Initially, the tests were used to screen the target population in accordance with the design specifications to determine eligibility for participation. Later, different tests were employed to measure comparative progress of the participants in terms of reading gain within and across reading systems, to measure intelligence levels, and to measure gain in various subject areas taught in the program.

The test instruments used were standardized tests normally used with urban school populations. In using these instruments, problems of administration and scoring arose, but these were by far the least of the research staff's concern. At the heart of the matter were the validity and reliability of the instruments as applied to a population for whom--by no stretch of the imagination--were they either normed or intended for use.

A. Rationale for the Selection of Testing Instruments

Since this was a field test of reading systems rather than one related to the differential treatment of students with various learning problems, it was necessary to attempt to eliminate some potential students. Those who were to be eliminated were those who were obviously mentally retarded, who had serious motor dysfunction and those who had psychological or social problems such as alcoholism, drug addiction and pronounced antisocial behavior. This was necessary since the field test did not provide for any treatment educationally or socially for persons who had such problems. Furthermore, in order to test the reading materials it was important to recruit students who had potential for learning.

As has been said earlier, vision and hearing tests were given to screen out or provide correction for those who had physical problems which would interfere with reading. An attempt was made to assure that no one in the classes had visual or hearing defects.

Similarly, certain tests were used in screening to rule out the persons with severe motor dysfunction and mental retardation. The caseworkers were asked not to refer such persons, and the screening was considered as a refinement of the caseworker screening. Before any such screening tests were chosen a number of experts in educational and psychological testing were consulted. It was on the basis of this consultation that two of the tests were chosen: the WAIS and the Bender-Gestalt.

The Gray Oral Reading Test was chosen on the advice of the adult education personnel in the New York State Department of Education. Their experience had been that paper and pencil tests during recruitment resulted in a high dropout rate. This rate had been reduced when they used the simpler reading tests.

The pencil and paper tests were the basic tool used to measure reading gain. Only with such quantitative data could one reading system be compared with another.

The tests used are described and discussed briefly in the following sections.

B. The Bender Motor Gestalt Test (The Visual Motor Gestalt Test)

This test was used in order to help field test personnel identify extreme perceptual dysfunctioning in prospective participants in the field and thus eliminate them from the study. According to its designer, the Bender-Gestalt "...has been used as a maturational test in visual motor gestalt function in children, to explore retardation, regression, loss of functional and organic brain defects in both adults and children, and to explore personality deviations.... It has been used by clinical psychologists during World War II in army medical installations, such as in the neuropsychiatric services of general hospitals, convalescent units of station hospitals, mental hygiene units of replacement training centers." [1]

The Bender-Gestalt is not a group test, but because of the large numbers of applicants to be interviewed and screened, it was administered as a group test. The groups ranged from three to as many as forty, and the examiners were Greenleigh Associates staff. Enlargements were made of the nine visual patterns; these were displayed one at a time and the examinees were free to draw the patterns on any portion of an 8-1/2" x 11" sheet of unlined paper. No time limit was established. Procedures for conducting the test as indicated in the manual were observed. The examiners were careful to establish an informal atmosphere prior to and during the course of the test.

Unfortunately, a clinical test designed for one-to-one administration has limited value in a group situation. The absence of a personal relationship between clinician and client was marked, and the enlargements were unsatisfactory simply because the examiners had no information about the visual acuity of those being tested. With a sizeable group in a large classroom this factor becomes critical.

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[1] Lauretta Bender, "Instructions for the Use of the Visual Motor Gestalt Test." (New York: American Orthopsychiatric Association), p. 3.

The examiners also observed difficulties in pencil manipulation. Many of the prospective students had not used a pencil in years, nor is it likely that they had been called upon to respond as "copyists" since their classroom days, if at all. Also noted were cases of extreme anxiety undoubtedly related to a lack of understanding of why they were there.

Field test procedures to evaluate and score this test were crude, the rationale being that for the purposes of this study untrained clinicians could detect meaningful distortions in reproduced figures. The tests were evaluated by field test staff who had studied the American Orthopsychiatric Association monograph.

The incidence of deviations from established patterning was high, yet the observations of the examiners cast doubt on a neuropsychiatric basis for these deviations. The lack of "pencil experience," the markedly high level of tension shown by many of the examinees, their bewilderment about the reason for being in the testing room, the doubts about visual acuity, and the absence of configurational norms for this population, led the evaluators to extend the limits of judgment well beyond those intended by the designers of the Bender-Gestalt. While no hard data were collected on configurational responses during the course of the field test, personal observation pointed to a marked improvement in motor control as pencil experience was gained.

Under group testing conditions such as those in the field test, and until such factors as outlined above are dealt with and norms established for functionally illiterate adults, the utility of the Bender-Gestalt as a diagnostic instrument is questionable.

C. Vocabulary List from the Vocabulary Scale of the Wechsler Adult Intelligence Scale

The test was used to derive a tentative I.Q. score. The forty-word vocabulary list was administered by the teachers during the screening session. The examiner read a word, and the adult being tested responded by giving a definition, a synonym or example, or by using the word in a sentence. The responses were recorded and then later scored by the examiner. The test was not timed and the student was encouraged to take his time answering. There was no attempt made to distribute students according to the I.Q. scores on this or any other test.

As with the Bender test, the vocabulary list of the WAIS was not designed to be administered by untrained persons, especially not by high school graduates. The problem of untrained examiners is further compounded when the persons being tested may not be able to express themselves in English. For students who could not speak any English, the test was not scored; however, for the persons who spoke only some English, the tests were counted and included in the mean scores reported elsewhere in the report.

In addition to the untrained examiners and the language difficulty as invalidating elements, there are certain cultural factors built into the test and test situation which penalize functionally illiterate and economically dependent persons.

D. Gray Oral Reading Test

This test was used to determine the reading level of prospective students in order to select those reading below the fifth-grade level and at the end of the program to measure progress. The test was designed to measure a person's ability to sight read; it made no attempt to measure comprehension.

This test, also, was administered by the teachers, after a three to five hour intensive training period conducted by field test supervisors.

Scoring procedures followed the instructions given in the test administration manual. Questions about pronunciation were frequently raised.

As mentioned above, this test makes no attempt to measure comprehension. Because of this, its effectiveness in determination of a meaningful reading level may be weakened. It may give an advantage to the non-English speaking person who can read phonetically, but without comprehension, while it may penalize those whose pronunciation is hampered by regional or cultural influences.

Despite these limitations, scores on this test correlate in a highly positive manner with comprehension scores on a test such as the Iowa. The Gray Oral Reading Test is basically simple to administer and generally less threatening to the students than a battery of paper and pencil tests. In addition, it is much simpler and therefore considerably cheaper to score than the Iowa Tests of Basic Skills.

E. The Iowa Tests of Basic Skills

The Iowa Tests of Basic Skills had been selected and declared to be the best tests presently available by a joint committee of the United States Office of Education and the Department of Labor to measure gains in reading and related skills and also to measure progress in arithmetic and social studies.

The questions on this paper and pencil test were grouped into five major areas: vocabulary, reading, language skills, work/study skills and arithmetic skills. These tests are presented in a re-usable testing booklet which contains questions for all skills for grades 3-9. In other words, in each of the five areas, the test is continuous for all grade levels. There is an overlap of items between successive grades in each area. The test is available in four different forms in order that the student is not exposed to the same items at different grade levels. The students mark their answers on a separate IBM answer sheet which can be either machine scored at the Measurement Research Center at the University of Iowa or hand scored.

Representatives of the Houghton-Mifflin Company, publishers of the test, instructed the teachers in the techniques of administering the tests. The teachers gave the test in the classroom on the fifth, thirty-fifth, sixty-fifth and eighty-first days of the project, using the third-, fourth-, fifth- and sixth-grade levels of the test respectively. The full-battery test was given at the first and the final testing, while only vocabulary and reading tests were given at the two interim points.

The Iowa Tests were selected during the planning of the field test as the best available for testing basic skills. Experience casts much doubt, however, on the "fit" of these tests for this adult population. It is not at all certain that either the full strengths or weaknesses of adult mastery of concepts and processes can be fairly derived from tests of this nature developed for younger people. A letter from one of the authors of the tests confirmed this impression, and he stated that a new series is in the making which may be expected to provide measures more suitable for adults.

The tests proved to be cumbersome and exasperating to both students and teachers. Students resented the tests because they were long, difficult and frustrating. Absences ran high during the testing periods, and the tests were christened "eyeball" tests by the more good-humored among the students.

Teachers generally felt that the tests were difficult and awkward to administer, especially since there were many absentees who had to be briefed and given different sections of the test while the rest of the class was involved with other activities. There was a great deal of minutiae to fill out, such as name blocks and class numbers. This was trying for an unsophisticated population. The anxiety of the test situation produced tensions in the class which were not immediately dispelled.

In addition, the accuracy of the machine scoring techniques at the Measurement Research Center (MRC) has been called into question by the experience of the field test. When a battery of tests was machine scored for a second time, discrepancies in individual scores were found. These inconsistencies in scores were attributed to the quality and condition of the students' answer sheets. The test scoring organization stated that the responses were smudged and that the carbon pencil marks were not always placed in the designated spaces. To do so requires fine visual discrimination. Because of these conditions, it was necessary that all Iowa tests and Lorge-Thorndike tests be hand scored in order that the scores be reliable.

The test scoring organization hand scored the test results for students in New Jersey. However, this was time consuming. All later tests in New York and California were hand scored by teachers and checked by field test staff. This experience points up a potential problem area for anyone using such tests for purposes of placement, particularly when time is important.

F. The Lorge-Thorndike Intelligence Test

The Lorge-Thorndike test was used to measure I.Q. on both verbal and nonverbal scales so as to have a fair estimate of this population's intelligence. The verbal battery is made up of subtests including word knowledge, sentence completion, verbal classification, verbal analogies, and arithmetic reasoning. The nonverbal battery is pictorial, diagrammatic, or numerical. The subtests are figure analogies, figure classification, and number series. The test was administered on the fortieth day by the classroom teacher with strict adherence to the manual of instructions. It was hand scored for the New Jersey classes by MRC and hand scored by teachers and rechecked by Greenleigh staff in California and New York. Virtually the same questions can be raised about the Lorge-Thorndike as were raised about the Iowa Tests of Basic Skills. It is unlikely that the results of the test present a fair estimate of the population's intelligence. Basic literacy demands on this test, as well as on the Iowa tests, derive from norms drawn from a totally different population.

G. Summary Evaluation of Testing Instruments

The testing program was designed to test progressive achievement in learning, but its implicit assumption is that the learner has been exposed to a formal school environment, that he is skilled in the know-how of test taking, that the speed-oriented type of problem he is asked to solve in the test resembles the type of problems he confronts in real life, that his cultural attitudes are similar to the social class attitudes of which the testing instruments are mute representatives, and that right answers are more meaningful than the method of thinking used to arrive at them. In effect, the cultural and attitudinal characteristics normally associated with these tests are not those shared by the project's students.

The sophistication of perceptual organization required by the Iowa and the Lorge-Thorndike should not be tacitly assumed as being possessed by literacy project students. A number of students experienced difficulty in transposing the answer in the booklet to the appropriate oval on the answer sheet. Some could not quickly locate the appropriate area on the answer sheet, and the affective response to the tests of many of the students was such as to increase perceptual disorganization. One may hypothesize from all of this a cognitive style among the poor that is radically different from other social classes because it is concrete rather than abstract, and that the testing procedures favor the latter style. If these people are "internal aliens" in our culture, how much more so are they aliens in our testing program?

There is an urgent need for the development of measures that will be usable with an adult population which has had limited educational experiences and which can think, speak and function otherwise at a level higher than it can show in reading and writing. Measures are also needed which will help predict performance in jobs, job training, and social responsibility requiring certain levels of literacy, and which will enable comparisons to be made with other populations.

X. RECOMMENDATIONS

These recommendations relate to four different areas:

1. Developing reading and educational programs for the functionally illiterate adult;
2. The administration of such programs;
3. The various supportive and other services required by students;
4. Cooperative research in any area.

They have resulted from the findings of this field test and they contain implications for all levels of government which have parts to play in making such programs possible. It is hoped that these recommendations will be helpful to anyone who plans to initiate or conduct an adult basic education program or cooperative research.

Classroom Materials and Curriculum

1. All reading systems used in this field test need to be improved. Although all were successful in improving the reading skills of the functionally illiterate adults, none were successful in bringing the majority of students to the eighth-grade reading level. In each of the states there were some classes which finished all of the materials included in two systems. However, most of these students were not, according to tests, reading at the eighth-grade level. This would indicate that the reading systems should add materials of increasing difficulty to higher grade levels than are now contained in the systems. Some systems were not as appropriate for the least literate students, others, less appropriate for the advanced students. None met the full range of needs.

It is known that the publishers of some of the materials are already working to improve their systems. To some extent systems were improved during the field test. New materials were added and revisions were begun.

The fact that systems need to be revised is not a criticism of the publishers, but rather a realization on the part of everyone involved in adult basic education that new and important ground is being broken. Whenever such a situation exists, there is considerable trial and error in relation to method and content.

2. Certain kinds of instructional materials should be avoided, at least for that portion of the adult student population on public welfare. Material which includes stories about persons on public welfare is depressing to these readers. Students resented such material because they felt that they were reading about themselves. Likewise, many of these adults resented slang and vulgarisms. These students aspired not to their own level of understanding but to that of the literate population. This they expressed over and over again to the teachers and the research staff.

3. Materials and curricula for this student group should include information about jobs and job requirements, how to fill out an application form, and role playing applying for a job. Two of the systems had some such material, and the students by and large liked this.

Even though some functionally illiterate adults cannot be expected to become independent in the foreseeable future, information about the world of work has meaning to all students. Many may become employable when their children become older. Others can use the information to help their children or grandchildren learn about the job market and its requirements. Student learnings affect a group wider than those in the classroom.

4. Special attention should be given to supplementary materials, for those reading at below the fifth-grade level, in social science, arithmetic, health information, home management and budgeting, and to materials which would assist the students in their day-to-day living. In the social sciences students expressed particular interest in Negro history, civil rights, local government and community services. In arithmetic they expressed interest in materials that would help them as consumers, in shopping and in making certain that they were given the right change. Fractions, oddly enough, were considered fascinating by many.

5. The curriculum should include instruction in how to take paper and pencil tests. In the beginning this activity should not be related to time pressure. Particularly for the student thirty years of age or older, such tests are threatening. If those students who are able to move into the labor market are to be successful, they will most frequently need to pass civil service tests or tests given by personnel offices. Young persons who enter the labor market from high school presumably have test-taking skill. If they do not, they are apt to fail. The older student who begins as a functional illiterate needs to acquire this skill along with reading and writing. Even in this field test, younger students who had better eyesight and more recent school experience, had an advantage in taking paper and pencil tests.

Testing

6. New achievement and intelligence testing instruments should be developed. There is a need for tests which have been standardized for the functionally illiterate adult. These should be set up in a way, at least for beginning students, that minimizes the need for skill in using paper and pencils, or IBM score sheets, or, for following directions which require fine eye movement.

Despite every effort to assure sound administration of the tests by having the publisher's representative train the teachers in their use, the days on which paper and pencil tests were given were days of frustration and stress. There is reason to believe that these days were harmful to the total educational process rather than supportive. It is recognized that the tests used were not intended for this population. However, a search of testing materials available at the time did not provide any leads to tests which would have been more appropriate. At the same time it is essential to have means of measuring student gains if a program is to be evaluated.

7. Until paper and pencil tests are developed which can be standardized for and are suited to the low literacy level of adult students in terms of eye demand, pencil manipulation and instructions, it is recommended that oral tests be given to measure gain. These have many drawbacks. They do not measure comprehension, nor are they suitable for the non-English speaking student. However, there was a positive correlation between the Gray and Iowa scores. Thus, in order to reduce tension and frustration the simpler tests should be used, at least for students below the fifth-grade reading level.

Teacher Selection, Training and Supervision

8. In recruiting and selecting teachers, their personal attributes should be given more consideration than their educational background. Although many of the certified teachers were successful in establishing rapport with the students, those least successful in rapport were frequently those who were certified. Particularly the older or retired teacher who had spent a lifetime teaching children found it difficult to treat the students as adults. This was not apparent for the younger certified teacher.

It appears, on the basis of observation, that the attributes which the teachers should have are warmth, understanding, flexibility, humor and the ability to accept persons who are of the lower socio-economic group.

9. Preservice training of several weeks duration should be planned for all teachers beginning in adult basic education. This should include training in the materials to be used, in understanding of the student population, methods of establishing rapport with the students, and techniques of grouping, teaching and helping individual students. Information about resources available to help with specific problems should also be included.

There are very few persons in any community who have had experience teaching the economically and socially deprived adult. Because of this, teachers entering into adult basic education should be given an intensive preservice training course which would prepare them for this endeavor.

10. In any adult basic education program, time should be planned for continuing inservice training of teachers. This training should provide an opportunity for teachers to discuss common problems, share experiences and suggest changes in curriculum or approach. Inservice training should not be planned too rigidly in terms of content, but should be able to adapt to the specific needs of the teachers at any given point.

11. There should be more experimentation using high school graduates with good preservice training in adult basic education. It is certain that there will not be enough certified teachers available to meet the total need. At the same time there is a reservoir of high school graduates who could be trained and employed. This would have two effects: 1) up-grading the persons who are available, and 2) meeting critical manpower shortages.

12. Teachers should have day-to-day supervision by a master teacher thoroughly familiar with adult basic education. This is particularly important if untrained teachers are to be used. It is clear that untrained teachers can be effective in teaching reading skills to functionally illiterate adults. However, they appear to need more supervision by a master teacher who can help them identify emerging learning problems, assist them in grouping students according to level of achievement, and keep all groups continuously at work.

13. In order to set minimum standards of preparation for subprofessional teachers to be drawn from the ranks of high school graduates, another category of certification is needed. A program should be initiated to evolve courses on the college level for qualified subprofessionals interested in teaching adult basic education. A special certification in adult basic education would be the end product of these courses.

Student Recruitment

14. Plans for an intensive recruitment program should be made to obtain students for any adult basic education program. Even in the field test, which had a relatively captive population of public welfare recipients and commitment on the part of the county welfare departments to recruit, recruiting was a problem. Adults do not like to admit they are illiterate; many fear the new and unknown and may need someone to motivate them. However, of those persons who remained in the classes for a week, few dropped out except for illness, jobs and child care problems.

15. Consideration should be given to employing former students of literacy classes to recruit new students. Although this is not a direct finding of this study, one adult educator involved in the field test reported that friends of the students were clamoring for new classes to be set up. In many fields the satisfied worker or client is the best recruiter. This should apply as well to adult basic education.

Student Grouping

16. Completely illiterate students should not be placed in classes with other students reading at the third- and fourth-grade levels. In the field test students who were completely illiterate were mixed with those with some reading skill. Although in some classes the better students helped the poorer students, the spread in level of student was too great. Better, more advanced students became bored at the slow pace of the poorer, less advanced.

17. If possible a bilingual teacher should be placed in a class in which the majority of students are non-English speaking. There was one class in a predominantly Spanish-American community in which the teacher was bilingual and all of the students Spanish-American. Although there was not a significant difference in gain scores, the morale of the class was better.

18. If a bilingual teacher is not available, bilingual students should be placed in classes with non-English speaking students. In a number of classes bilingual students helped the teacher explain words and meanings to the non-English speaking. This gave the class a sense of student participation in the learning process. It can, however, impede the progress of the bilingual student because time is required to assist others and the teacher. Furthermore, to be effective the bilingual student must demonstrate leadership qualities to be accepted by the non-English speaking students.

Supportive Services for Students

19. It is recommended that supportive services be planned to help students stay in classes. This is particularly necessary for those from the poverty population who find it difficult to arrange for child care, transportation, doctor's and clinic appointments and family emergencies.

20. It is strongly recommended that day care programs be planned in conjunction with adult basic education programs. Child care is most difficult to arrange and expensive on an individual child basis. Frequently mothers are too concerned about the welfare of their children to concentrate in class. A day care facility related to the adult school would be less expensive and would make it possible for the mother to have her children nearby. It would also be possible to allow the mothers to work in the day care facility as part of their educational and training experience.

Participation in Title V Programs

21. Basic education courses with Title V funds (or similar public assistance funding) should not be restricted to those persons who are considered employable. The effects on family relationships, children's school achievements, and ability to plan and make purchases, although not quantified, was attested to over and over by the students. This is just as important for the public assistance recipient who is not employable either immediately, or in the near future, as it is for the employable adult. The long run effect on the educational attainment of children and the raising of the sights of all functionally illiterate adults has not been measured.

The unemployable public assistance recipient cannot take advantage of adult basic literacy programs provided under Title II - B alone, unless supplementary funds, like those through Title V, are available. The cost of transportation, extra food and child care are too great. Furthermore, when children no longer need the day-to-day supervision of the mother, she may become employable if basic literacy skills are given her during the time she is needed in the home.

Funding

22. Federal financing, or any other financing of programs for functionally illiterate adults should be for more than a year, and methods of funding should be similar and coincide in time for all agencies expected to cooperate. Unless such funding is for a period of several years and similar for each agency, it is not possible for states and localities to plan courses to assure a program of continuous education which will bring the students to a level of achievement which will help them become independent. At the

present time, plans made by one agency cannot be carried out because the agency with which it is cooperating cannot assure continuity because of uncertainty of funding.

23. Funds should be made available to mount a full-scale program, with regularly employed teachers, for all functionally illiterate adults who are not employed on a full-day basis. Only in this way will the problem of illiteracy be attacked effectively. Whether present II - B and Title V funds as now conceived are continued or not, funding must be continued which will provide for full-time education and the student costs of attending classes.

24. Adult basic education for any functionally illiterate adult who desires it should become a part of every school. Teachers should be trained in adult basic education and paid on an annual, not hourly, basis, and be recognized as an integral part of the ongoing school system. At present, teachers in adult education are given little or no job security or assurance that their employment will be continuous. It is time that adult education and basic education for adults receive recognition of their importance.

Cooperative Research or Program Coordination

25. In planning for cooperative research or action programs, a third party should be made available to facilitate planning, communications and coordination. This third element might be the state OEO or local CAA or any other third party. It is also possible that the cooperating agencies might agree on which agency will carry responsibility for calling meetings, assuring that communications are maintained, and defining responsibilities of each cooperating agency. This could be done on the basis of which agency 1) has the primary responsibility for the day-to-day operation of the program, 2) contributes the major portion of the funds, 3) initiates the cooperative efforts, or a combination of the three. In any event, someone must take the first step; without a third party this may not occur. It is not clear to state and local agencies who should initiate cooperative efforts. In a research project this falls to the persons responsible for research. In an action program this element may be lacking.

Further Research

26. There is need for more research and study in four general areas. These were not intended to be covered by this field test, but recognition of the need for this research has grown out of the experience of the project. These areas are:

a. What attributes should be looked for in a teacher for adult basic education. It is clear that the teacher who cannot establish rapport with the class should not be considered. It is not clear, except on the basis of observation, what parts such attributes as warmth, flexibility, understanding and maturity, play. They are important in helping the class become a group. It is not clear whether they help the class learn.

b. Similarly, study and research need to be undertaken in what kinds of training persons who will teach functionally illiterate adults should have. In this field test teachers learned how to use the reading systems to which they were assigned. Some came to the field test with basic skills of teaching techniques and class management. In two systems teachers were given considerable latitude in applying known techniques. However, on the basis of gain scores alone there is no evidence that such skills were important. This points to the need to test adult student gains using various teaching methods and techniques.

c. There is also a need for further research and study in the areas of curriculum development and testing methods.

d. An area needing further study is how much ethnic background and age should be given consideration in teacher selection. As has been said the older former elementary teachers were least able to establish rapport with the students. Whether the average age of the certificated teacher, which was forty-two compared with thirty-seven for the high school graduate, was a factor in there being no significant differences in gain scores for this level of preparation, cannot be established. Similarly, whether the fact that 50 percent of the high school graduates were Negro, compared with 33 percent of the certificated teachers and 25 percent of the college graduates, was a factor in the significant differences in gain scores for the high school graduates, was not determined. In both New Jersey and New York the majority of students were Negro and so were their high school graduate teachers. This may or may not have affected gains. The most successful teacher in terms of gain scores was a certified teacher who was a Negro with a predominantly Negro class.

Other Recommendations

27. It is recommended that classes be held in settings as accessible to the student as possible. Transportation to class is expensive and is frequently unreliable. This is particularly important in areas which do not have public transportation systems. Even in cities with good transportation systems, frequent transfers from one facility to another should be avoided.

28. Every classroom should have available a library of supplementary reading materials, atlases, dictionaries in large type, visual aids, maps, charts and pictures, recordings and slides appropriate to the subject matter being taught.

29. Field trips should be planned which could be chosen by the class and related to subject matter. However, field trips should not be too frequent nor take the place of classroom experiences.

30. Community aides should be considered as the liaison staff between education and welfare. This was successful in Contra Costa County.

31. Classes should be held in the daytime, five days a week, to maximize the learning process. Although there will always be a need for evening classes to accommodate illiterates who are employed, the problems of child care and transportation increase in the evening. If classes are not held every work day, there is learning loss between class periods.

32. Regular counseling and guidance services should be made available. Some students should be given intensive diagnosis in order that educational programs can be arranged. Others need help in determining what steps they should take in preparing for work.

33. It is strongly recommended that educational programs for adults be planned which will take them through the high school level. Few job opportunities are open to those without a high school diploma or its equivalent. Students are aware of this and realize that unless they can achieve high school equivalency, they have little chance of becoming independent.

APPENDIX A - DISTRIBUTION OF STUDENTS

Distribution of Students to Classes by Demographic Characteristics - New Jersey

Table 55

Race by System and Level of Teacher

Teacher Level	Total				Race by Basic Education Systems															
					I				II				III				IV			
	T	W	N	SA	T	W	N	SA	T	W	N	SA	T	W	N	SA	T	W	N	SA
Total	662	72	455	133	144	9	106	29	149	16	106	27	188	24	127	36	181	23	116	41
H.S.	231	32	160	39	48	4	35	9	49	6	37	6	67	11	45	11	67	11	43	13
Coll.	215	21	147	47	50	3	39	8	49	3	34	12	59	7	41	11	57	8	33	16
Cert.	216	19	148	47	46	2	32	12	51	7	35	9	62	6	41	14	57	4	40	12

N=662

Table 56

Race by System and Level of Teacher (in percents)

Teacher Level	Total				Race by Basic Education Systems															
					I				II				III				IV			
	T	W	N	SA	T	W	N	SA	T	W	N	SA	T	W	N	SA	T	W	N	SA
Total	100	11	69	20	100	6	74	20	100	11	71	18	100	13	68	19	100	13	64	23
H.S.	100	14	69	17	100	8	73	19	100	12	76	12	100	16	67	16	100	16	64	19
Coll.	100	10	68	22	100	6	78	16	100	6	69	25	100	12	70	19	100	14	59	28
Cert.	100	9	69	22	100	4	70	26	100	14	69	17	100	10	66	23	100	7	70	21

N=662

Table 57

Sex by System and Level of Teacher

Level of Teacher	Total			Basic Education Systems											
				I			II			III			IV		
	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F
Total	662	61	601	144	19	125	149	21	128	188	12	176	181	9	172
H.S.	231	26	205	48	8	40	49	8	41	67	6	61	67	4	63
Coll.	215	19	196	50	6	44	49	7	42	59	3	56	57	3	54
Cert.	216	16	200	46	5	41	51	6	45	62	3	59	57	2	55

N=662

Table 58

Sex by System and Level of Teacher (in percents)

Level of Teacher	Total			Basic Education Systems											
				I			II			III			IV		
	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F
Total	100	9	91	100	13	87	100	14	86	100	6	94	100	5	95
H.S.	100	11	89	100	17	83	100	16	84	100	9	91	100	6	94
Coll.	100	9	91	100	12	88	100	14	86	100	5	95	100	5	95
Cert.	100	7	93	100	11	89	100	12	88	100	5	95	100	4	96

N=662

Table 59

Age by System and Level of Teacher

Level of Teacher	Total			Basic Education Systems											
				I			II			III			IV		
	T	30	30^+	T	30	30^+	T	30	30^+	T	30	30^+	T	30	30^+
Total	659	240	419	144	58	86	148	63	85	187	55	132	180	64	116
H.S.	229	87	142	48	21	27	48	15	33	67	24	43	66	27	39
Coll.	214	75	139	50	19	31	49	20	29	58	16	42	57	20	37
Cert.	216	78	138	46	18	28	51	28	23	62	15	47	57	17	40

N=659

Table 60

Age by System and Level of Teacher (in percents)

Level of Teacher	Total			Basic Education Systems											
				I			II			III			IV		
	T	30	30^+	T	30	30^+	T	30	30^+	T	30	30^+	T	30	30^+
Total	100	36	64	100	40	60	100	43	57	100	29	71	100	36	64
H.S.	100	38	62	100	44	56	100	31	69	100	36	64	100	41	59
Coll.	100	35	65	100	38	62	100	41	59	100	28	72	100	35	65
Cert.	100	36	64	100	39	61	100	55	45	100	24	76	100	30	70

N=659

Distribution of Students to Classes
by Demographic Characteristics - New York

Table 61

Race by System and Level of Teacher

Teacher	Total				Race by Basic Education System															
					I				II				III				IV			
Level	T	W	N	SA	T	W	N	SA	T	W	N	SA	T	W	N	SA	T	W	N	SA
Total	552	74	407	62	145	15	113	15	136	22	93	19	130	18	95	15	141	20	106	13
H.S.	188	24	137	23	49	4	42	2	52	7	35	10	41	6	31	3	46	7	29	8
Coll.	187	28	133	24	50	4	39	7	43	9	28	4	46	6	32	8	48	9	34	5
Cert.	177	22	137	15	46	6	32	6	41	6	30	5	43	6	32	4	47	4	43	-

N=552

Table 62

Race by System and Level of Teacher (in percents)

Teacher	Total				Race by Basic Education System															
					I				II				III				IV			
Level	T	W	N	SA	T	W	N	SA	T	W	N	SA	T	W	N	SA	T	W	N	SA
Total	100	13	74	11	100	10	78	10	100	16	68	14	100	14	73	12	100	14	75	9
H.S.	100	13	73	12	100	8	86	4	100	13	67	19	100	15	76	7	100	15	63	17
Coll.	100	15	71	13	100	8	78	14	100	21	65	9	100	13	70	17	100	19	71	10
Cert.	100	12	77	8	100	13	70	13	100	15	73	12	100	14	74	9	100	9	91	-

N=552

Table 63

Sex by System and Level ot Teacher

Teacher	Total			Sex by Basic Education System											
				I			II			III			IV		
Level	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F
Total	552	124	428	145	35	110	136	28	108	130	32	98	141	29	112
H.S.	188	45	143	49	15	34	52	10	42	41	10	31	46	10	36
Coll.	187	43	144	50	12	38	43	9	34	46	12	34	48	10	38
Cert.	177	36	141	46	8	38	41	9	32	43	10	33	47	9	38

N=552

Table 64

Sex by System and Level of Teacher (in percents)

				Sex by Basic Education System											
Teacher	Total			I			II			III			IV		
Level	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F
Total	100	22	78	100	24	76	100	21	79	100	25	75	100	21	79
H.S.	100	24	76	100	31	69	100	19	81	100	24	76	100	22	78
Coll.	100	23	77	100	24	76	100	21	79	100	26	74	100	21	79
Cert.	100	20	80	100	17	83	100	22	78	100	23	77	100	19	81

N=552

Table 65

Age by System and Level of Teacher

				Age by Basic Education System											
Teacher	Total			I			II			III			IV		
Level	T	-30	30+	T	-30	30+	T	-30	30+	T	-30	30+	T	-30	30+
Total	552	113	439	145	31	114	136	25	111	130	31	99	141	26	115
H.S.	188	41	147	49	12	37	52	10	42	41	10	31	46	9	37
Coll.	187	37	150	50	12	38	43	5	38	46	11	35	48	9	39
Cert.	177	35	142	46	7	39	41	10	31	43	10	33	47	8	39

N=552

Table 66

Age by System and Level of Teacher (in percents)

				Age by Basic Education System											
Teacher	Total			I			II			III			IV		
Level	T	-30	30+	T	-30	30+	T	-30	30+	T	-30	30+	T	-30	30+
Total	100	20	79	100	21	78	100	18	82	100	24	76	100	19	81
H.S.	100	22	78	100	24	76	100	19	81	100	24	75	100	20	80
Coll.	100	20	80	100	24	76	100	11	89	100	24	75	100	19	82
Cert.	100	20	80	100	15	84	100	24	75	100	23	77	100	17	83

N=552

Distribution of Students to Classes
by Demographic Characteristics - California

Table 67

Race by System by Level of Teacher

Teacher					Race by Basic Education System															
	Total				I				II				III				IV			
Level	T	W	N	SA	T	W	N	SA	T	W	N	SA	T	W	N	SA	T	W	N	SA
Total	601	187	271	110	144	34	57	46	155	42	84	19	148	46	78	16	154	65	52	29
H.S.	202	39	102	47	46	7	12	25	53	9	36	4	51	7	34	6	52	16	20	12
Coll.	197	57	105	30	47	18	17	11	55	3	42	7	48	17	27	3	47	19	19	9
Cert.	202	91	64	33	51	9	28	10	47	30	6	8	49	22	17	7	55	30	13	8

N=601

Table 68

Race by System by Level of Teacher (in percents)

Teacher					Race by Basic Education System															
	Total				I				II				III				IV			
Level	T	W	N	SA	T	W	N	SA	T	W	N	SA	T	W	N	SA	T	W	N	SA
Total	100	31	45	18	100	24	40	32	100	27	54	12	100	31	53	11	100	42	34	19
H.S.	100	19	50	23	100	15	26	54	100	17	68	8	100	14	67	12	100	31	38	23
Coll.	100	29	53	15	100	38	36	23	100	5	76	13	100	35	56	6	100	40	40	19
Cert.	100	45	32	16	100	18	55	20	100	64	13	17	100	45	35	14	100	55	24	15

N=601

Table 69

Age by System by Level of Teacher

Teacher				Age by Basic Education System											
	Total			I			II			III			IV		
Level	T	-30	30+	T	-30	30+	T	-30	30+	T	-30	30+	T	-30	30+
Total	601	171	430	144	50	94	155	38	117	148	44	104	154	39	115
H.S.	202	60	142	46	11	35	53	12	41	51	23	28	52	14	38
Coll.	197	46	151	47	20	27	55	7	48	48	9	39	47	10	37
Cert.	202	65	137	51	19	32	47	19	28	49	12	37	55	15	40

N=601

Table 70

Age by System and Level of Teacher (in percents)

				Age by Basic Education System											
Teacher	Total			I			II			III			IV		
Level	T	-30	30+	T	-30	30+	T	-30	30+	T	-30	30+	T	-30	30+
Total	100	28	71	100	35	66	100	24	75	100	29	70	100	26	74
H.S.	100	30	70	100	24	76	100	23	78	100	45	54	100	27	74
Coll.	100	23	77	100	43	58	100	12	87	100	19	81	100	21	79
Cert.	100	32	68	100	37	62	100	41	60	100	24	76	100	27	73

N=601

Table 71

Sex by System and Level of Teacher

				Sex by Basic Education System											
Teacher	Total			I			II			III			IV		
Level	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F
Total	601	253	348	144	57	87	155	74	81	148	58	90	154	64	90
H.S.	202	86	116	46	18	28	53	27	26	51	17	34	52	24	28
Coll.	197	77	120	47	21	26	55	20	35	48	20	28	47	16	31
Cert.	202	90	112	51	18	33	47	27	20	49	21	28	55	24	31

N=601

Table 72

Sex by System and Level of Teacher (in percents)

				Sex by Basic Education System											
Teacher	Total			I			II			III			IV		
Level	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F
Total	100	42	58	100	40	60	100	48	52	100	39	61	100	42	58
H.S.	100	43	57	100	39	61	100	51	49	100	33	67	100	46	54
Coll.	100	39	61	100	45	55	100	36	64	100	42	58	100	34	66
Cert.	100	45	55	100	35	65	100	57	43	100	43	57	100	44	56

N=601

Three State Original Assignment

Table 73

Sex of Students in Original Assignment by System

	Total			Sex by Basic Education System											
				I			II			III			IV		
	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F
Total	1547	378	1169	392	97	295	380	104	276	382	85	297	393	92	301
N. J.	522	49	473	131	17	114	128	18	110	130	7	123	133	7	126
N. Y.	495	113	382	129	29	100	121	25	96	119	30	89	126	29	97
Cal.	530	216	314	132	51	81	131	61	70	133	48	85	134	56	78

N=1547

Table 74

Sex of Students in Original Assignment by System (in percents)

	Total			Sex by Basic Education System											
				I			II			III			IV		
	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F
Total	100	24	76	100	25	75	100	27	73	100	22	78	100	23	77
N. J.	100	9	91	100	13	87	100	14	86	100	5	95	100	5	95
N. Y.	100	23	77	100	22	78	100	21	79	100	25	75	100	23	77
Cal.	100	41	59	100	39	61	100	47	53	100	36	64	100	42	58

N=1547

Table 75

Age of Student in Original Assignment by System

	Total			Age by Basic Education System											
				I			II			III			IV		
	T	30^-	30^+	T	30^-	30^+	T	30^-	30^+	T	30^-	30^+	T	30^-	30^+
Total	1547	435	1112	392	121	271	380	108	272	382	102	280	393	104	289
N. J.	522	185	335	131	53	78	128	52	75	130	36	94	133	44	88
N. Y.	495	101	394	129	25	104	121	24	97	119	28	91	126	24	102
Cal.	530	148	382	132	43	89	131	32	99	133	38	95	134	35	99

N=1547

Table 76

Age of Student in Original Assignment by System (in percents)

				Age by Basic Education System											
	Total			I			II			III			IV		
	T	30^-	30^+	T	30^-	30^+	T	30^-	30^+	T	30^-	30^+	T	30^-	30^+
Total	100	28	72	100	31	69	100	28	72	100	27	73	100	26	74
N. J.	100	36	64	100	40	60	100	41	58	100	27	73	100	33	66
N. Y.	100	20	79	100	20	81	100	19	80	100	24	76	100	19	81
Cal.	100	28	71	100	33	67	100	24	76	100	28	71	100	26	74

N=1547

Table 77

Race of Students in Original Assignment by System

					Race by Basic Education System															
	Total				I				II				III				IV			
	T	W	N	SA	T	W	N	SA	T	W	N	SA	T	W	N	SA	T	W	N	SA
Total	1547	300	948	260	392	52	247	83	380	70	248	53	382	80	235	57	393	98	218	67
N. J.	522	60	350	110	131	8	97	26	128	13	93	22	130	19	82	28	133	20	78	34
N. Y.	495	67	362	58	129	13	99	14	121	18	83	18	119	18	84	15	126	18	96	11
Cal.	530	173	236	92	132	21	51	43	131	39	72	13	133	43	69	14	134	60	44	22

N=1547

Table 78

Race of Students in Original Assignment by System (in percents)

					Race by Basic Education System															
	Total				I				II				III				IV			
	T	W	N	SA	T	W	N	SA	T	W	N	SA	T	W	N	SA	T	W	N	SA
Total	100	19	61	17	100	13	63	21	100	18	65	14	100	21	62	15	100	25	55	17
N. J.	100	11	67	21	100	6	74	20	100	10	73	17	100	15	63	22	100	15	59	26
N. Y.	100	14	73	12	100	10	77	11	100	15	69	15	100	15	71	13	100	14	76	9
Cal.	100	33	45	17	100	23	39	33	100	30	55	10	100	32	52	11	100	45	33	16

N=1547

Three State Total Assignment

Table 79

Sex of Students in Total Assignment by System

				Sex by Basic Education System											
	Total			I			II			III			IV		
	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F
Total	1815	438	1377	433	111	322	440	123	317	466	102	364	476	102	374
N.J.	662	61	601	144	19	125	149	21	128	188	12	176	181	9	172
N.Y.	552	124	428	145	35	110	136	28	108	130	32	98	141	29	112
Cal.	601	253	348	144	57	87	155	74	81	148	58	90	154	64	90

N=1815

Table 80

Sex of Students in Total Assignment by System (in percents)

				Sex by Basic Education System											
	Total			I			II			III			IV		
	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F
Total	100	24	76	100	26	74	100	28	72	100	22	78	100	21	79
N.J.	100	9	91	100	13	87	100	14	86	100	6	94	100	5	95
N.Y.	100	22	78	100	24	76	100	21	79	100	25	75	100	21	79
Cal.	100	42	58	100	40	60	100	48	52	100	39	61	100	42	58

N=1815

Table 81

Age of Students in Total Assignment by System

				Age by Basic Education System											
	Total			I			II			III			IV		
	T	30^-	30^+	T	30^-	30^+	T	30^-	30^+	T	30^-	30^+	T	30^-	30^+
Total	1815	524	1288	433	139	294	440	126	313	466	130	335	476	129	346
N.J.	659	240	419	144	58	86	148	63	85	187	55	132	180	64	116
N.Y.	552	113	439	145	31	114	136	25	111	130	31	99	141	26	115
Cal.	601	171	430	144	50	94	155	38	117	148	44	104	154	39	115

N=1815

Table 82

Age of Students in Total Assignment by System (in percents)

	Total			Age by Basic Education System											
				I			II			III			IV		
	T	30^-	30^+	T	30^-	30^+	T	30^-	30^+	T	30^-	30^+	T	30^-	30^+
Total	100	29	71	100	32	68	100	29	71	100	28	72	100	27	73
N. J.	100	36	64	100	40	60	100	43	57	100	29	71	100	36	64
N. Y.	100	20	79	100	21	78	100	18	82	100	24	77	100	19	81
Cal.	100	28	71	100	35	66	100	24	75	100	29	70	100	26	74

N=1815

Table 83

Race of Students in Total Assignment by System

	Total				Race by Basic Education System															
					I				II				III				IV			
	T	W	N	SA	T	W	N	SA	T	W	N	SA	T	W	N	SA	T	W	N	SA
Total	1815	333	1133	305	433	57	276	90	440	80	283	65	466	88	300	67	476	108	274	83
N. J.	662	72	455	133	144	9	106	29	149	16	106	27	188	24	127	36	181	23	116	41
N. Y.	552	74	407	62	145	14	113	15	136	22	93	19	130	18	95	15	141	20	106	13
Cal.	601	187	271	110	144	34	57	46	155	42	84	19	148	46	78	16	154	65	52	29

N=1815

Table 84

Race of Students in Total Assignment by System (in percents)

	Total				Race by Basic Education System															
					I				II				III				IV			
	T	W	N	SA	T	W	N	SA	T	W	N	SA	T	W	N	SA	T	W	N	SA
Total	100	18	62	17	100	13	64	21	100	18	64	15	100	19	64	14	100	23	58	17
N. J.	100	11	69	20	100	6	74	20	100	11	71	18	100	13	68	19	100	23	64	23
N. Y.	100	13	74	11	100	10	78	10	100	16	68	14	100	14	73	12	100	14	75	9
Cal.	100	31	45	18	100	24	40	32	100	27	54	12	100	31	53	11	100	42	34	19

N=1815

APPENDIX B - REPLACEMENT AND DROPOUT DATA

Table 85

Dropout Rate by System, Entire 17 Weeks of Field Test, New Jersey

System	Number Originally Assigned	Percent of Originals Dropped Out	Number of Replacements	Percent of Replacements Dropped Out	Total Number Assigned	Percent Total Dropouts
Total	540	42	145	38	685	41
I	135	25	13	31	148	26
II	135	31	23	35	158	32
III	135	58	59	39	194	52
IV	135	53	50	40	185	49

Table 86

Dropout Rate by System, Entire 17 Weeks of Field Test, New York

System	Number Originally Assigned	Percent of Originals Dropped Out	Number of Replacements	Percent of Replacements Dropped Out	Total Number Assigned	Percent Total Dropouts
Total	517	31	68	16	585	30
I	133	35	17	24	150	35
II	129	32	24	21	153	30
III	126	33	11	-	137	31
IV	129	25	16	13	145	23

Table 87

Dropout Rate by System, Entire 17 Weeks of Field Test, California

System	Number Originally Assigned	Percent of Originals Dropped Out	Number of Replacements	Percent of Replacements Dropped Out	Total Number Assigned	Percent Total Dropouts
Total	531	34	72	39	603	35
I	133	36	11	36	144	36
II	131	35	26	50	157	38
III	133	23	15	53	148	26
IV	134	43	20	20	154	40

Table 88

Iowa Mean Scores
Grade 3, Vocabulary, New Jersey

Level of Teacher	Total	Basic Education Systems I	II	III	IV
Total	3.416	3.283	3.386	3.364	3.636
H.S. Grad.		3.207	3.072	3.358	3.619
Coll. Grad.		3.173	3.377	3.471	4.005
Cert.		3.477	3.736	3.255	3.224

N=466

Table 89

Iowa Mean Scores
Grade 3, Reading Comprehension, New Jersey

Level of Teacher	Total	Basic Education Systems I	II	III	IV
Total	3.397	3.285	3.254	3.435	3.619
H.S. Grad.		3.051	2.910	3.664	3.862
Coll. Grad.		3.361	3.095	3.351	3.873
Cert.		3.451	3.797	3.308	3.021

N=466

Table 90

Iowa Mean Scores
Grade 3, Language, New Jersey

Level of Teacher	Total	Basic Education Systems I	II	III	IV
Total	3.327	3.183	3.084	3.397	3.647
H.S. Grad.		3.066	2.851	3.508	3.638
Coll. Grad.		3.088	2.756	3.327	3.925
Cert.		3.405	3.692	3.366	3.332

N=466

Table 91

Iowa Mean Scores
Grade 3, Work-Study Skills, New Jersey

Level of Teacher	Total	Basic Education Systems I	II	III	IV
Total	3.320	3.240	3.169	3.276	3.594
H.S. Grad.		3.154	3.082	3.461	3.586
Coll. Grad.		3.288	2.769	3.141	3.863
Cert.		3.282	3.697	3.245	3.288

N=466

Table 92

Iowa Mean Scores
Grade 3, Arithmetic, New Jersey

Level of Teacher	Total	Basic Education Systems I	II	III	IV
Total	3.768	3.645	3.644	3.712	4.073
H.S. Grad.		3.571	3.608	3.694	4.114
Coll. Grad.		3.646	3.246	3.722	4.455
Cert.		3.721	4.114	3.718	3.574

N=466

Table 93

Iowa Mean Scores
Grade 3, Composite, New Jersey

Level of Teacher	Total	Basic Education Systems I	II	III	IV
Total	3.443	3.320	3.304	3.435	3.717
H.S. Grad.		3.200	3.103	3.531	3.769
Coll. Grad.		3.300	3.041	3.402	4.028
Cert.		3.467	3.806	3.379	3.288

N=466

Table 94

Iowa Mean Scores
Grade 4, Vocabulary, New Jersey

Level of Teacher	Total	Basic Education Systems			
		I	II	III	IV
Total	4.240	4.179	4.154	4.293	4.354
H.S. Grad.		4.247	3.795	4.239	4.351
Coll. Grad.		4.059	4.145	4.732	4.515
Cert.		4.232	4.572	3.998	4.156

N=427

Table 95

Iowa Mean Scores
Grade 4, Reading Comprehension, New Jersey

Level of Teacher	Total	Basic Education Systems			
		I	II	III	IV
Total	3.867	3.825	3.595	4.025	4.064
H.S. Grad.		4.000	3.398	3.882	4.200
Coll. Grad.		3.792	3.258	4.358	4.276
Cert.		3.689	4.175	3.885	3.611

N=427

Table 96 a/

Iowa Mean Scores
Grade 5, Vocabulary, New Jersey

Level of Teacher	Total	Basic Education Systems			
		I	II	III	IV
Total	4.805	4.892	4.340	4.849	5.009
H.S. Grad.		4.732	4.591	4.981	4.963
Coll. Grad		5.086	4.263	4.953	5.439
Cert.		4.858	3.600	4.619	4.452

N=356

a/ Does not include two classes in System II, Cert. teacher who did not take Grade 5 ITBS.

Table 97 a/

Iowa Mean Scores
Grade 5, Reading Comprehension, New Jersey

Level of Teacher	Total	Basic Education Systems			
		I	II	III	IV
Total	4.308	4.434	3.809	4.409	4.427
H.S. Grad.		4.409	4.122	4.756	4.267
Coll. Grad.		4.517	3.437	4.270	4.909
Cert.		4.383	3.813	4.191	3.943

N=356

a/ Does not include two classes in System II, Cert. teacher who did not take Grade 5 ITBS.

Table 98 a/

Iowa Mean Scores
Grade 6, Vocabulary, New Jersey

Level of Teacher	Total	Basic Education Systems			
		I	II	III	IV
Total	5.056	5.077	5.205	4.848	5.083
H.S. Grad.		5.088	4.945	5.584	5.042
Coll. Grad.		4.717	4.332	4.203	5.538
Cert.		5.383	6.574	4.741	4.436

N=383

a/ One class in System III, College Grad. did not take vocabulary or reading tests and their bottom scores are included in analysis.

Two classes in System II, Cert. teacher took 6th grade tests early because they finished the materials.

Table 99 a/

Iowa Mean Scores
Grade 6, Reading Comprehension, New Jersey

Level of Teacher	Total	Basic Education Systems I	II	III	IV
Total	4.484	4.557	4.520	4.275	4.571
H.S. Grad.		4.600	4.447	5.053	4.677
Coll. Grad.		4.457	3.568	3.441	5.106
Cert.		4.608	5.715	4.341	3.595

N=383

a/ One class in System III, College Grad. did not take vocabulary or reading tests and their bottom scores are included in analysis.

Two classes in System II, Cert. teacher took 6th grade tests early because they finished the materials.

Table 100 a/

Iowa Mean Scores
Grade 6, Language, New Jersey

Level of Teacher	Total	Basic Education Systems I	II	III	IV
Total	4.635	4.458	4.558	4.793	4.775
H.S. Grad.		4.391	4.363	5.350	4.703
Coll. Grad.		4.340	3.900	4.363	5.218
Cert.		4.618	5.589	4.644	4.191

N=383

a/ Two classes in System II, Cert. teacher took 6th grade tests early because they finished the materials.

Table 101 [a]

Iowa Mean Scores
Grade 6, Work Study Skills, New Jersey

Level of Teacher	Total	Basic Education Systems I	II	III	IV
Total	4.228	4.331	3.993	4.312	4.270
H.S. Grad.		4.435	3.911	5.013	4.313
Coll. Grad.		4.271	3.590	3.863	4.562
Cert.		4.295	4.570	4.015	3.759

N=383

[a] Two classes in System II, Cert. teacher took 6th grade tests early because they finished the materials.

Table 102 [a]

Iowa Mean Scores
Grade 6, Arithmetic, New Jersey

Level of Teacher	Total	Basic Education Systems I	II	III	IV
Total	4.575	4.448	4.621	4.709	4.546
H.S. Grad.		4.950	4.632	5.416	4.523
Coll. Grad.		4.537	4.013	4.191	4.782
Cert.		3.943	5.304	4.485	4.214

N=383

[a] Two classes in System II, Cert. teacher took 6th grade tests early because they finished the materials.

Table 103 [a]

Iowa Mean Scores
Grade 6, Composite, New Jersey

Level of Teacher	Total	Basic Education Systems I	II	III	IV
Total	4.596	4.572	4.580	4.590	4.651
H.S. Grad.		4.691	4.461	5.281	4.652
Coll. Grad.		4.463	3.884	4.022	5.047
Cert.		4.565	5.548	4.444	4.036

N=383

[a] One class in System III, College Grad. did not take vocabulary or reading tests and their bottom scores are included in analysis.

Two classes in System II, Cert. teacher took 6th grade tests early because they finished the materials.

Table 104

Iowa Mean Scores
Grade 3, Vocabulary, New York

Level of Teacher	Total	Basic Education Systems I	II	III	IV
Total	2.753	2.670	2.652	2.986	2.692
H.S. Grad.		2.791	2.397	3.080	2.700
Coll. Grad.		2.498	2.481	2.727	2.830
Cert.		2.747	3.061	3.121	2.562

N=417

Table 105

Iowa Mean Scores
Grade 3, Reading Comprehension, New York

Level of Teacher	Total	Basic Education Systems I	II	III	IV
Total	2.665	2.678	2.356	2.921	2.672
H.S. Grad.		2.582	1.891	3.246	2.956
Coll. Grad.		2.578	2.319	2.458	2.739
Cert.		2.881	2.842	3.021	2.351

N=417

Table 106

Iowa Mean Scores
Grade 3, Language, New York

Level of Teacher	Total	Basic Education Systems I	II	III	IV
Total	2.696	2.605	2.493	2.945	2.724
H.S. Grad.		2.538	2.184	3.291	2.774
Coll. Grad.		2.665	2.339	2.621	2.642
Cert.		2.603	2.936	2.908	2.751

N=417

Table 107

Iowa Mean Scores
Grade 3, Work Study Skills, New York

Level of Teacher	Total	Basic Education Systems			
		I	II	III	IV
Total	2.676	2.666	2.465	2.850	2.701
H.S. Grad.		2.638	2.138	3.151	2.665
Coll. Grad.		2.718	2.348	2.491	2.748
Cert.		2.636	2.891	2.885	2.692

N=417

Table 108

Iowa Mean Scores
Grade 3, Arithmetic, New York

Level of Teacher	Total	Basic Education Systems			
		I	II	III	IV
Total	3.037	2.949	2.846	3.241	3.095
H.S. Grad.		2.871	2.556	3.577	3.094
Coll. Grad.		2.885	2.748	2.585	3.191
Cert.		3.094	3.218	3.495	3.011

N=417

Table 109

Iowa Mean Scores
Grade 3, Composite, New York

Level of Teacher	Total	Basic Education Systems			
		I	II	III	IV
Total	2.767	2.715	2.566	2.990	2.779
H.S. Grad.		2.682	2.244	3.269	2.838
Coll. Grad.		2.678	2.452	2.579	2.833
Cert.		2.786	2.985	3.087	2.676

N=417

Table 110

Iowa Mean Scores
Grade 4, Vocabulary, New York

Level of Teacher	Total	Basic Education Systems			
		I	II	III	IV
Total	3.441	3.375	3.452	3.545	3.397
H.S. Grad.		3.287	3.497	3.867	3.361
Coll. Grad.		3.447	3.324	3.287	3.297
Cert.		3.381	3.536	3.500	3.513

N=390

Table 111

Iowa Mean Scores
Grade 4, Reading Comprehension, New York

Level of Teacher	Total	Basic Education Systems			
		I	II	III	IV
Total	3.057	3.034	2.929	3.236	3.019
H.S. Grad.		2.820	2.723	3.647	3.025
Coll. Grad.		3.194	2.859	2.823	2.982
Cert.		3.066	3.221	3.249	3.045

N=390

Table 112

Iowa Mean Scores
Grade 5, Vocabulary, New York

Level of Teacher	Total	Basic Education Systems			
		I	II	III	IV
Total	3.950	3.810	4.130	4.032	3.860
H.S. Grad.		3.629	4.030	4.842	3.654
Coll. Grad.		3.591	3.740	3.474	3.894
Cert.		4.252	4.631	3.918	4.015

N=373

Table 113

Iowa Mean Scores
Grade 5, Reading Comprehension, New York

Level of Teacher	Total	Basic Education Systems I	II	III	IV
Total	3.486	3.512	3.449	3.604	3.392
H. S. Grad.		3.365	3.033	3.842	3.417
Coll. Grad.		3.312	3.300	3.223	3.139
Cert.		3.897	4.119	3.776	3.568

N=373

Table 114

Iowa Mean Scores
Grade 6, Vocabulary, New York

Level of Teacher	Total	Basic Education Systems I	II	III	IV
Total	4.613	4.455	4.755	4.788	4.480
H. S. Grad.		4.641	4.816	5.433	4.364
Coll. Grad.		4.231	4.440	4.342	4.400
Cert.		4.500	4.959	4.600	4.653

N=355

Table 115

Iowa Mean Scores
Grade 6, Reading Comprehension, New York

Level of Teacher	Total	Basic Education Systems I	II	III	IV
Total	4.069	4.047	3.998	4.145	4.087
H. S. Grad.		3.956	3.672	4.433	3.912
Coll. Grad.		3.941	4.152	3.685	4.219
Cert.		4.271	4.224	4.281	4.156

N=355

Table 116

Iowa Mean Scores
Grade 6, Language, New York

Level of Teacher	Total	Basic Education Systems			
		I	II	III	IV
Total	3.993	3.936	3.833	4.110	4.092
H.S. Grad.		3.763	3.647	4.496	3.964
Coll. Grad.		4.172	3.616	3.415	3.988
Cert.		3.864	4.224	4.355	4.297

N=355

Table 117

Iowa Mean Scores
Grade 6, Work Study Skills, New York

Level of Teacher	Total	Basic Education Systems			
		I	II	III	IV
Total	4.143	4.087	4.094	4.188	4.203
H.S. Grad.		4.209	4.053	4.370	4.285
Coll. Grad.		4.131	3.736	3.662	4.073
Cert.		3.896	4.448	4.471	4.224

N=355

Table 118

Iowa Mean Scores
Grade 6, Arithmetic, New York

Level of Teacher	Total	Basic Education Systems			
		I	II	III	IV
Total	4.391	4.362	4.347	4.375	4.474
H.S. Grad.		4.553	4.291	4.385	4.318
Coll. Grad.		4.194	4.000	4.031	4.442
Cert.		4.336	4.707	4.655	4.650

N=355

Table 119

Iowa Mean Scores
Grade 6, Composite, New York

Level of Teacher	Total	Basic Education Systems I	II	III	IV
Total	4.243	4.178	4.207	4.319	4.270
H.S. Grad.		4.231	4.100	4.619	4.173
Coll. Grad.		4.128	3.992	3.827	4.231
Cert.		4.175	4.510	4.471	4.394

N=355

Table 120

Iowa Mean Scores
Grade 3, Vocabulary, California

Level of Teacher	Total	Basic Education Systems I	II	III	IV
Total	2.973	3.356	3.148	2.543	2.882
H.S. Grad.		2.904	3.242	2.708	3.129
Coll. Grad.		3.563	3.158	2.353	2.662
Cert.		3.539	3.038	2.596	2.894

N=383

Table 121

Iowa Mean Scores
Grade 3, Reading Comprehension, California

Level of Teacher	Total	Basic Education Systems I	II	III	IV
Total	3.020	3.502	3.097	2.821	2.663
H.S. Grad.		2.893	3.491	3.000	2.692
Coll. Grad.		3.881	2.992	2.593	2.631
Cert.		3.675	2.816	2.916	2.671

N=383

Table 122

Iowa Mean Scores
Grade 3, Language, California

Level of Teacher	Total	Basic Education Systems I	II	III	IV
Total	2.826	3.057	2.958	2.618	2.677
H.S. Grad.		2.615	3.239	2.892	2.750
Coll. Grad.		3.104	2.942	2.285	2.679
Cert.		3.353	2.688	2.736	2.624

N=383

Table 123

Iowa Mean Scores
Grade 3, Work Study Skills, California

Level of Teacher	Total	Basic Education Systems			
		I	II	III	IV
Total	2.932	3.313	2.926	2.793	2.710
H.S. Grad.		2.770	3.179	3.032	2.600
Coll. Grad.		3.522	2.795	2.398	2.893
Cert.		3.564	2.822	3.064	2.632

N=383

Table 124

Iowa Mean Scores
Grade 3, Arithmetic, California

Level of Teacher	Total	Basic Education Systems			
		I	II	III	IV
Total	3.387	3.677	3.556	3.071	3.260
H.S. Grad.		3.559	3.576	3.437	2.988
Coll. Grad.		3.648	3.563	2.725	3.390
Cert.		3.786	3.528	3.068	3.341

N=383

Table 125

Iowa Mean Scores
Grade 3, Composite, California

Level of Teacher	Total	Basic Education Systems			
		I	II	III	IV
Total	3.028	3.381	3.134	2.774	2.838
H.S. Grad.		2.944	3.348	3.021	2.833
Coll. Grad.		3.552	3.084	2.475	2.845
Cert.		3.581	2.972	2.876	2.835

N=383

Table 126

Iowa Mean Scores
Grade 4, Vocabulary, California

Level of Teacher	Total	Basic Education Systems			
		I	II	III	IV
Total	3.520	3.872	3.738	3.415	3.066
H.S. Grad.		3.629	3.803	4.050	3.291
Coll. Grad		3.823	3.668	2.895	2.961
Cert.		4.137	3.749	3.387	2.980

N=445

Table 127

Iowa Mean Scores
Grade 4, Reading Comprehension, California

Level of Teacher	Total	Basic Education Systems			
		I	II	III	IV
Total	3.221	3.374	3.399	3.215	2.886
H.S. Grad.		3.010	3.478	3.689	2.891
Coll. Grad.		3.651	3.173	2.838	2.997
Cert.		3.420	3.554	3.185	2.783

N=445

Table 128

Iowa Mean Scores
Grade 5, Vocabulary, California

Level of Teacher	Total	Basic Education Systems			
		I	II	III	IV
Total	4.060	4.069	3.985	4.057	4.116
H.S. Grad.		3.421	3.616	4.362	4.170
Coll. Grad.		4.196	4.414	3.786	4.392
Cert.		4.577	3.665	4.033	3.829

N=336

Table 129

Iowa Mean Scores
Grade 5, Reading Comprehension, California

Level of Teacher	Total	Basic Education Systems I	II	III	IV
Total	3.651	3.715	3.283	3.702	3.818
H.S. Grad.		3.257	3.042	3.771	3.615
Coll. Grad.		3.925	3.600	3.574	4.138
Cert.		3.955	3.029	3.758	3.730

N=330

Table 130

Iowa Mean Scores
Grade 6, Vocabulary, California

Level of Teacher	Total	Basic Education Systems I	II	III	IV
Total	4.493	4.635	4.727	4.253	4.369
H.S. Grad.		3.957	4.612	4.559	4.218
Coll. Grad.		4.726	5.091	3.906	4.673
Cert.		5.118	4.478	4.316	4.267

N=341

Table 131

Iowa Mean Scores
Grade 6, Reading Comprehension, California

Level of Teacher	Total	Basic Education Systems I	II	III	IV
Total	4.126	4.278	4.120	4.120	3.987
H.S. Grad.		3.745	4.204	4.384	3.892
Coll. Grad.		4.261	4.188	4.038	4.227
Cert.		4.711	3.997	3.938	3.867

N=335

Table 132

Iowa Mean Scores
Grade 6, Language, California

Level of Teacher	Total	Basic Education Systems I	II	III	IV
Total	3.960	3.973	3.837	3.931	4.141
H.S. Grad.		3.722	3.700	4.300	3.739
Coll. Grad.		3.935	4.106	3.559	4.413
Cert.		4.211	3.689	3.958	4.350

N=343

Table 133

Iowa Mean Scores
Grade 6, Work Study Skills, California

Level of Teacher	Total	Basic Education Systems I	II	III	IV
Total	3.890	4.135	3.963	3.720	3.777
H.S. Grad.		3.765	3.988	4.044	3.661
Coll. Grad.		4.274	4.064	3.603	3.952
Cert.		4.325	3.853	3.527	3.746

N=343

Table 134

Iowa Mean Scores
Grade 6, Arithmetic, California

Level of Teacher	Total	Basic Education Systems I	II	III	IV
Total	4.262	4.350	4.299	4.120	4.317
H.S. Grad.		3.943	4.338	4.128	3.818
Coll. Grad.		4.370	4.315	4.176	4.648
Cert.		4.668	4.256	4.055	4.583

N=343

Table 135

Iowa Mean Scores
Grade 6, Composite, California

Level of Teacher	Total	Basic Education Systems I	II	III	IV
Total	4.121	4.261	4.191	3.996	4.061
H.S. Grad.		3.804	4.169	4.284	3.779
Coll. Grad.		4.304	4.352	3.809	4.304
Cert.		4.600	4.058	3.909	4.158

N=343

Table 136

Iowa Scores
Mean Difference from Grades 3 to 4, Vocabulary, New Jersey

Level of Teacher	Total	Basic Education Systems I	II	III	IV
Total	.780	.807	.807	.818	.679
H.S. Grad.		.919	.826	.790	.603
Coll. Grad.		.919	.918	.975	.493
Cert.		.594	.656	.676	1.057

N=349

Table 137

Iowa Scores
Mean Difference from Grades 3 to 4, Reading Comprehension, New Jersey

Level of Teacher	Total	Basic Education Systems I	II	III	IV
Total	.421	.478	.352	.502	.346
H.S. Grad.		.945	.703	.181	.397
Coll. Grad.		.353	.182	.821	.293
Cert.		.161	.064	.544	.348

N=349

Table 138 [a]

Iowa Scores
Mean Difference from Grades 3 to 5, Vocabulary, New Jersey

Level of Teacher	Total	Basic Education Systems I	II	III	IV
Total	1.327	1.480	1.230	1.394	1.147
H.S. Grad.		1.326	1.490	1.629	1.128
Coll. Grad.		1.759	1.096	1.336	1.191
Cert.		1.355	.150	1.148	1.105

N=316

[a] Does not include two classes in System II Cert. which did not take 5th grade tests.

Table 139 a/

Iowa Scores
Mean Difference from Grades 3 to 5, Reading Comprehension, New Jersey

Level of Teacher	Total	Basic Education Systems			
		I	II	III	IV
Total	.892	1.009	.879	.988	.667
H.S. Grad.		1.235	1.214	1.135	.417
Coll. Grad.		.881	.567	1.018	.897
Cert.		.921	.325	.752	.660

N=316

a/ Does not include two classes in System II Cert. which did not take 5th grade tests.

Table 140 a/

Iowa Scores
Mean Difference from Grades 3 to 6, Vocabulary, New Jersey

Level of Teacher	Total	Basic Education Systems			
		I	II	III	IV
Total	1.494	1.571	1.717	1.380	1.293
H.S. Grad.		1.625	1.929	2.155	1.355
Coll. Grad.		1.364	.993	.603	1.312
Cert.		1.721	2.268	1.384	1.177

N=361

a/ One class in System III, College Grad. did not take vocabulary or reading tests and the bottom scores are included in the analysis.

Two classes in System II, Cert. teacher took 6th grade tests early because they completed the materials.

Table 141 a/

Iowa Scores
Mean Difference from Grade 3 to 6, Reading Comprehension, New Jersey

Level of Teacher	Total	Basic Education Systems			
		I	II	III	IV
Total	.965	1.087	1.161	.733	.859
H.S. Grad.		1.428	1.632	1.403	.887
Coll. Grad.		.894	.414	.048	1.124
Cert.		.953	1.388	.752	.409
N=361					

a/ One class in System III, College Grad did not take vocabulary or reading tests and the bottom scores are included in the analysis.

Two classes in System II, Cert. teacher took 6th grade tests early because they completed the materials.

Table 142 a/

Iowa Scores
Mean Difference from Grade 3 to 6, Language, New Jersey

Level of Teacher	Total	Basic Education Systems			
		I	II	III	IV
Total	1.207	1.135	1.384	1.322	.993
H.S. Grad.		1.178	1.671	1.755	.916
Coll. Grad.		1.179	1.000	1.045	1.194
Cert.		1.053	1.440	1.128	.791
N=361					

a/ Two classes in System II, Cert. teacher took 6th grade tests early because they completed the materials.

Table 143 [a]

Iowa Scores
Mean Difference from Grade 3 to 6, Work Study, New Jersey

Level of Teacher	Total	Basic Education Systems I	II	III	IV
Total	.773	.907	.716	.908	.541
H.S. Grad.		1.138	.906	1.426	.555
Coll. Grad.		.821	.721	.681	.532
Cert.		.774	.452	.548	.536

N=361

[a] Two classes in System II, Cert. teacher took 6th grade tests early because they completed the materials.

Table 144 [a]

Iowa Scores
Mean Difference from Grade 3 to 6, Arithmetic, New Jersey

Level of Teacher	Total	Basic Education Systems I	II	III	IV
Total	.691	.691	.922	.862	.289
H.S. Grad.		1.181	1.238	1.603	.206
Coll. Grad.		.745	.676	.326	.179
Cert.		.176	.776	.608	.573

N=361

[a] Two classes in System II, Cert. teacher took 6th grade tests early because they finished the materials.

Table 145 [a]

Iowa Scores
Mean Difference from Grade 3 to 6, Composite, New Jersey

Level of Teacher	Total	Basic Education Systems			
		I	II	III	IV
Total	1.029	1.083	1.184	1.046	.793
H.S. Grad.		1.316	1.479	1.674	.781
Coll. Grad.		1.012	.769	.552	.871
Cert.		.932	1.264	.880	.691

N=361

a/ Two classes in System II, Cert. teacher took 6th grade tests early because they finished the materials.

Table 146 [a]

Iowa Scores
Mean Difference from Grades 4 to 6, Vocabulary, New Jersey

Level of Teacher	Total	Basic Education Systems			
		I	II	III	IV
Total	.725	.769	.933	.562	.618
H.S. Grad.		.745	1.103	1.365	.752
Coll. Grad.		.463	.121	-.457	.780
Cert.		1.088	1.612	.708	.190

N=349

a/ One class in System III, College Grad. did not take vocabulary or reading tests and the bottom scores are included in analysis.

Two classes in System II, Cert. teacher took 6th grade tests early because they finished the materials.

Table 147 [a]

Iowa Scores
Mean Difference from Grades 4 to 6, Reading Comprehension, New Jersey

Level of Teacher	Total	Basic Education Systems I	II	III	IV
Total	.545	.614	.820	.233	.494
H.S. Grad.		.455	.929	1.223	.490
Coll. Grad.		.600	.236	-.839	.790
Cert.		.776	1.324	.208	.076

N=349

[a] One class in System III, College Grad. did not take vocabulary or reading tests and the bottom scores are included in analysis.

Two classes in System II, Cert. teacher took 6th grade tests early because they finished the materials.

Table 148 [a]

Iowa Scores
Mean Difference from Grades 5 to 6, Vocabulary, New Jersey

Level of Teacher	Total	Basic Education Systems I	II	III	IV
Total	.108	.069	.116	.126	.130
H.S. Grad.		.274	.403	.526	.148
Coll. Grad.		-.469	-.238	-.446	.156
Cert.		.397	.150	.283	.060

N=316

[a] Two classes in System II, Cert. teacher took 6th grade tests early because they finished the materials.

One class in System III, College Grad. did not take vocabulary or reading tests and the bottom scores are included in the analysis.

Table 149 [a]

Iowa Scores
Mean Difference from Grades 5 and 6, Reading Comprehension, New Jersey

Level of Teacher	Total	Basic Education Systems I	II	III	IV
Total	.092	.048	.265	-.091	.210
H.S. Grad.		.119	.314	.268	.445
Coll. Grad.		-.028	-.013	-.629	.278
Cert.		.055	1.575	.078	-.240

N=316

a/ Two classes in System II, Cert. teacher took 6th grade tests early because they finished the materials.

One class in System III, College Grad. did not take vocabulary or reading tests and the bottom scores are included in the analysis.

Table 150

Iowa Scores
Mean Difference from Grades 3 to 4, Vocabulary, New York

Level of Teacher	Total	Basic Education Systems I	II	III	IV
Total	.673	.568	.727	.623	.787
H.S. Grad.		.383	1.014	1.041	.741
Coll. Grad.		.783	.819	.728	.550
Cert.		.488	.370	.200	.969

N=304

Table 151

Iowa Scores
Mean Difference from Grade 3 to 4, Reading Comprehension, New York

Level of Teacher	Total	Basic Education Systems I	II	III	IV
Total	.344	.188	.462	.363	.383
H.S. Grad.		.071	.800	.377	.097
Coll. Grad.		.363	.319	.544	.236
Cert.		.092	.270	.189	.744

N=304

Table 152

Iowa Scores
Mean Difference from Grades 3 to 5, Vocabulary, New York

Level of Teacher	Total	Basic Education Systems I	II	III	IV
Total	1.285	1.113	1.442	1.245	1.361
H.S. Grad.		.875	1.727	1.995	1.134
Coll. Grad.		1.017	1.105	1.164	1.568
Cert.		1.442	1.478	.729	1.425

N=304

Table 153

Iowa Scores

Mean Difference from Grades 3 to 5, Reading Comprehension, New York

Level of Teacher	Total	Basic Education Systems I	II	III	IV
Total	.911	.855	1.055	.863	.894
H.S. Grad.		.933	1.227	.691	.666
Coll. Grad.		.620	.767	1.116	.777
Cert.		1.054	1.152	.771	1.181

N=304

Table 154

Iowa Scores

Mean Difference from Grades 3 to 6, Vocabulary, New York

Level of Teacher	Total	Basic Education Systems I	II	III	IV
Total	1.804	1.695	2.026	1.744	1.790
H.S. Grad.		1.917	2.323	2.536	1.731
Coll. Grad.		1.510	1.850	1.764	1.577
Cert.		1.704	1.896	1.104	1.991

N=303

Table 155

Iowa Scores

Mean Difference from Grades 3 to 6, Reading Comprehension, New York

Level of Teacher	Total	Basic Education Systems I	II	III	IV
Total	1.369	1.321	1.547	1.211	1.417
H.S. Grad.		1.317	1.741	1.250	1.055
Coll. Grad.		1.197	1.457	1.364	1.482
Cert.		1.469	1.443	1.043	1.700

N=304

Table 156

Iowa Scores
Mean Difference from Grades 3 to 6, Language, New York

Level of Teacher	Total	Basic Education Systems I	II	III	IV
Total	1.268	1.300	1.212	1.137	1.399
H.S. Grad.		1.325	1.364	1.259	1.307
Coll. Grad.		1.353	1.110	1.004	1.514
Cert.		1.215	1.161	1.161	1.403

N=304

Table 157

Iowa Scores
Mean Difference from Grades 3 to 6, Work Study Skills, New York

Level of Teacher	Total	Basic Education Systems I	II	III	IV
Total	1.427	1.349	1.482	1.377	1.502
H.S. Grad.		1.617	1.909	1.341	1.683
Coll. Grad.		1.353	1.224	1.376	1.464
Cert.		1.096	1.309	1.407	1.366

N=304

Table 158

Iowa Scores
Mean Difference from Grades 3 to 6, Arithmetic, New York

Level of Teacher	Total	Basic Education Systems I	II	III	IV
Total	1.272	1.285	1.348	1.125	1.330
H.S. Grad.		1.783	1.609	.745	1.317
Coll. Grad.		1.023	1.148	1.580	1.236
Cert.		1.127	1.283	1.018	1.406

N=304

Table 159

Iowa Scores
Mean Difference from Grades 3 to 6, Composite, New York

Level of Teacher	Total	Basic Education Systems I	II	III	IV
Total	1.425	1.393	1.512	1.313	1.488
H.S. Grad.		1.608	1.782	1.418	1.424
Coll. Grad.		1.273	1.329	1.416	1.450
Cert.		1.331	1.422	1.139	1.572

N=304

Table 160

Iowa Scores
Mean Difference from Grades 4 to 5, Vocabulary, New York

Level of Teacher	Total	Basic Education Systems I	II	III	IV
Total	.612	.545	.715	.623	.583
H.S. Grad.		.492	.714	.955	.393
Coll. Grad.		.233	.286	.436	1.018
Cert.		.954	1.109	.529	.456

N=304

Table 161

Iowa Scores
Mean Difference from Grades 4 to 5, Reading Comprehension, New York

Level of Teacher	Total	Basic Education Systems I	II	III	IV
Total	.567	.668	.592	.500	.511
H.S. Grad.		.863	.427	.314	.569
Coll. Grad.		.257	.448	.572	.541
Cert.		.962	.883	.582	.438

N=304

Table 162

Iowa Scores
Mean Difference from Grades 4 to 6, Vocabulary, New York

Level of Teacher	Total	Basic Education Systems			
		I	II	III	IV
Total	1.129	1.128	1.291	1.121	1.012
H.S. Grad.		1.533	1.309	1.495	.990
Coll. Grad.		.727	1.000	1.036	1.027
Cert.		1.215	1.526	.904	1.022

N=303

Table 163

Iowa Scores
Mean Difference from Grades 4 to 6, Reading Comprehension, New York

Level of Teacher	Total	Basic Education Systems			
		I	II	III	IV
Total	1.025	1.134	1.085	.848	1.034
H.S. Grad.		1.246	.941	.873	.959
Coll. Grad.		.833	1.138	.820	1.245
Cert.		1.377	1.174	.854	.956

N=304

Table 164

Iowa Scores
Mean Difference from Grades 5 to 6, Vocabulary, New York

Level of Teacher	Total	Basic Education Systems			
		I	II	III	IV
Total	.522	.583	.593	.499	.429
H.S. Grad.		1.042	.595	.541	.597
Coll. Grad.		.493	.800	.600	.009
Cert.		.262	.417	.375	.566

N=303

Table 165.

Iowa Scores
Mean Difference from Grades 5 to 6, Reading Comprehension, New York

Level of Teacher	Total	Basic Education Systems			
		I	II	III	IV
Total	.458	.466	.492	.348	.523
H.S. Grad.		.383	.514	.559	.390
Coll. Grad.		.577	.690	.248	.705
Cert.		.415	.291	.271	.519

N=304

Table 166

Iowa Scores
Mean Difference from Grades 3 to 4, Vocabulary, California

Level of Teacher	Total	Basic Education Systems			
		I	II	III	IV
Total	.784	.742	.671	1.084	.463
H.S. Grad.		.967	.975	1.427	.313
Coll. Grad.		.513	.621	.658	.530
Cert.		.744	.533	1.218	.505

N=235

Table 167

Iowa Scores
Mean Difference from Grades 3 to 4, Reading Comprehension, California

Level of Teacher	Total	Basic Education Systems			
		I	II	III	IV
Total	.447	.047	.449	.653	.534
H.S. Grad.		.227	.175-	.790	.480
Coll. Grad.		.033	.454	.361	.725
Cert.		.052-	.989	.877	.390

N=235

Table 168

Iowa Scores
Mean Difference from Grades 3 to 5, Vocabulary, California

Level of Teacher	Total	Basic Education Systems			
		I	II	III	IV
Total	1.309	.975	1.029	1.669	1.309
H.S. Grad.		1.033	.875	1.790	1.640
Coll. Grad.		.860	1.129	1.403	1.545
Cert.		1.008	.900	1.877	.848

N=235

Table 169

Iowa Scores
Mean Difference from Grades 3 to 5, Reading Comprehension, California

Level of Teacher	Total	Basic Education Systems I	II	III	IV
Total	.857	.458	.590	1.000	1.240
H.S. Grad.		.720	.175	.893	1.253
Coll. Grad.		.253	.738	.997	1.470
Cert.		.424	.567	1.150	1.000

N=233

Table 170

Iowa Scores
Mean Difference from Grades 3 to 6, Vocabulary, California

Level of Teacher	Total	Basic Education Systems I	II	III	IV
Total	1.628	1.464	1.663	1.782	1.535
H.S. Grad.		1.387	1.738	2.060	1.893
Coll. Grad.		1.187	1.775	1.452	1.637
Cert.		1.676	1.300	1.868	1.186

N=234

Table 171

Iowa Scores
Mean Difference from Grades 3 to 6, Reading Comprehension, California

Level of Teacher	Total	Basic Education Systems I	II	III	IV
Total	1.235	1.009	1.173	1.363	1.320
H.S. Grad.		1.080	.850	1.603	1.673
Coll. Grad.		.707	1.292	1.234	1.416
Cert.		1.148	1.144	1.205	.981

N=232

Table 172

Iowa Scores
Mean Difference from Grades 3 to 6, Language, California

Level of Teacher	Total	Basic Education Systems			
		I	II	III	IV
Total	1.243	.944	1.015	1.381	1.500
H.S. Grad.		1.193	.850	1.607	1.733
Coll. Grad.		.740	.954	1.132	1.430
Cert.		.916	1.322	1.423	1.400

N=235

Table 173

Iowa Scores
Mean Difference from Grades 3 to 6, Work Study Skills, California

Level of Teacher	Total	Basic Education Systems			
		I	II	III	IV
Total	1.003	.875	1.090	.951	1.143
H.S. Grad.		1.013	1.275	1.190	1.960
Coll. Grad.		.780	1.058	.965	.870
Cert.		.848	1.011	.605	.819

N=235

Table 174

Iowa Scores
Mean Difference from Grades 3 to 6, Arithmetic, California

Level of Teacher	Total	Basic Education Systems			
		I	II	III	IV
Total	.954	.827	.498	1.169	1.096
H.S. Grad.		.467	.813	.890	1.713
Coll. Grad.		.913	.492	1.339	1.005
Cert.		.992	.233	1.309	.743

N=235

Table 175

Iowa Scores
Mean Difference from Grades 3 to 6, Composite, California

Level of Teacher		Basic Education Systems I	II	III	IV
Total	1.203	1.020	1.095	1.312	1.198
H.S. Grad.		1.040	1.113	1.463	1.793
Coll. Grad.		.847	1.121	1.190	1.225
Cert.		1.112	1.011	1.277	1.014

N=235

Table 176

Iowa Scores
Mean Difference from Grades4 to 5, Vocabulary, California

Level of Teacher	Total	Basic Education Systems I	II	III	IV
Total	.525	.233	.359	.584	.846
H.S. Grad.		.067	.100-	.363	1.327
Coll. Grad.		.347	.508	.745	1.015
Cert.		.264	.367	.659	.343

N=235

Table 177

Iowa Scores
Mean Difference from Grades4 to 5, Reading Comprehension, California

Level of Teacher	Total	Basic Education Systems I	II	III	IV
Total	.408	.411	.141	.343	.702
H.S. Grad.		.493	.350	.103	.773
Coll. Grad.		.220	.283	.633	.745
Cert.		.476	.422-	.273	.605

N=233

Table 178

Iowa Scores
Mean Difference from Grades 4 to 6, Vocabulary, California

Level of Teacher	Total	Basic Education Systems			
		I	II	III	IV
Total	.844	.722	.993	.698	1.078
H.S. Grad.		.420	.763	.633	1.580
Coll. Grad.		.673	1.154	.794	1.121
Cert.		.932	.767	.650	.681

N=234

Table 179

Iowa Scores
Mean Difference from Grades 4 to 6, Reading Comprehension, California

Level of Teacher	Total	Basic Education Systems			
		I	II	III	IV
Total	.791	.962	.724	.701	.804
H.S. Grad.		.853	1.025	.813	1.193
Coll. Grad.		.673	.838	.869	.732
Cert.		1.200	.156	.327	.590

N=232

Table 180

Iowa Scores
Mean Difference from Grades 5 to 6, Vocabulary, California

Level of Teacher	Total	Basic Education Systems			
		I	II	III	IV
Total	.320	.489	.634	.113	.229
H.S. Grad.		.353	.863	.270	.253
Coll. Grad.		.327	.646	.048	.089
Cert.		.668	.400	.009-	.338

N=234

Table 181

Iowa Scores
Mean Difference from Grades 5 to 6, Reading Comprehension, California

Level of Teacher	Total	Basic Education Systems I	II	III	IV
Total	.380	.551	.583	.360	.081
H.S. Grad.		.360	.675	.710	.420
Coll. Grad.		.453	.554	.231	.053-
Cert.		.724	.578	.055	.045-

N=231

Table 182

Missing Data Correlation Matrix

Variable	(1) Initial Gray Oral	(2) Final Gray Oral	(3) 3rd Grade Iowa Composite	(4) 6th Grade Iowa Composite	(5) 3rd Grade Iowa Reading Comprehension	(6) 6th Grade Iowa Reading Comprehension	(7) Gray Oral Change	(8) Iowa Composite Change	(9) Iowa Reading Comprehension Change	(10) White/ Nonwhite	(11) Negro/ Non-Negro	(12) Spanish-American/ Non-Spanish-American	(13) Male/ Nonmale	(14) Under 30/Not Under 30
1	1.0000	.6538	.6252	.5338	.5811	.4568	.0937	.2095-	.2255-	.0247	.2410	.2946-	.2089-	.1005
2	.6538	1.0000	.5946	.5809	.5435	.4557	.8188	.0685-	.1713-	.0044-	.0340	.0370-	.1013-	.1660
3	.6252	.5946	1.0000	.7694	.9126	.6752	.3008	.40000	.3789-	.0779	.0737	.1525-	.1765-	.3041
4	.5338	.5809	.7694	1.0000	.7140	.8638	.3497	.2717	.0965	.0694	.0525	.1243-	.1222-	.2666
5	.5811	.5435	.9126	.7140	1.0000	.6706	.2712	.3545-	.4882-	.0964	.0593	.1558-	.1580-	.2704
6	.4568	.4557	.6752	.8638	.6706	1.0000	.2389	.2151	.3193	.0731	.0721	.1571-	.0825-	.2106
7	.0937	.8188	.3008	.3497	.2712	.2389	1.0000	.0733	.0513-	.0218-	.1384-	.1787	.0047	.0934
8	.2095-	.0685-	.4000-	.2717	.3545-	.2151	.0733	1.0000	.7129	.0058-	.0766-	.0765	.1137	.1355-
9	.2255-	.1713-	.3789-	.0965	.4882-	.3193	.0513-	.7129	1.0000	.0370-	.0117-	.0218	.0888	.1170-
10	.0247	.0044-	.0779	.0694	.0964	.0731	.0218-	.0058-	.0370-	1.0000	.6108-	.2132-	.1578	.0416-
11	.2410	.0340	.0737	.0525	.0593	.0721	.1384-	.0766-	.0117-	.6108-	1.0000	.5790-	.1602	.0371
12	.2946-	.0370-	.1525-	.1243-	.1558-	.1571-	.1787	.0765	.0218	.2132-	.5790-	1.0000	.0246	.0263-
13	.2089-	.1013-	.1765-	.1222-	.1580-	.0825-	.0047	.1137	.0888	.1578	.1602-	.0246	1.0000	.1841-
14	.1005	.1660	.3041	.2666	.2704	.2106	.0934	.1355-	.1170-	.0416-	.0371	.0263-	.1841-	1.0000

Joint Frequencies for Missing Data Correlation Matrix

Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
1	1854	1088	1265	1081	1265	1073	1058	897	894	1808	1808	1808	1808	1808
2	1088	1088	940	1029	940	1021	1058	871	868	1079	1079	1079	1079	1079
3	1265	940	1265	966	1265	963	938	897	894	1265	1265	1265	1265	1265
4	1081	1029	966	1081	966	1073	1008	897	894	1079	1079	1079	1079	1079
5	1265	940	1265	966	1265	963	938	897	894	1265	1265	1265	1265	1265
6	1073	1021	963	1073	963	1073	1000	894	894	1071	1071	1071	1071	1071
7	1058	1058	938	1008	938	1000	1058	871	868	1058	1058	1058	1058	1058
8	897	871	897	897	897	894	871	897	894	897	897	897	897	897
9	894	868	894	894	894	894	868	894	894	894	894	894	894	894
10	1808	1079	1265	1079	1265	1071	1058	897	894	1808	1808	1808	1808	1808
11	1808	1079	1265	1079	1265	1071	1058	897	894	1808	1808	1808	1808	1808
12	1808	1079	1265	1079	1265	1071	1058	897	894	1808	1808	1808	1808	1808
13	1808	1079	1265	1079	1265	1071	1058	897	894	1808	1808	1808	1808	1808
14	1808	1079	1265	1079	1265	1071	1058	897	894	1808	1808	1808	1808	1808

APPENDIX D

BIBLIOGRAPHY

PREFATORY NOTES

There is not a large body of writing related to materials and teaching of adult literacy classes germane to the present study.

The literature on curricula for adult basic education has, with exception of the work done by UNESCO, limited itself to the definition of ultimate objectives and goals. The UNESCO literature might easily serve as a model for future curriculum developers in adult basic education programs in the United States because it, and it alone, deals with concrete operational objectives. The single greatest lack in curriculum for adult basic education, as determined from a review of the literature, has clearly to do with the absence of proximate goals, operational objectives, and the assessment of student needs.

Writers in the field agree on the principle of basing operational objectives on student needs and interests and on developing a program in basic education that is thoroughly functional in that it addresses itself to the linguistic environment in which the student lives and on the words and phrases in common usage. The best single example of the functional curriculum to date was the program for illiterates developed by the United States Army in World War II.

Most authorities, then, agree on general goals and on the need to devise curriculum and methods suited to the life experience of the students being taught, but few go beyond this. The need to understand the psychological and sociological dimensions of the adult learner's world, as corequisite with curricular development is stimulating a growing literature on these aspects of the problem. Yet little specific research exists on the teaching-learning process itself, e.g., the relationship between the development of readiness, meanings and sensory motor skills in the adult and a wide range of tested techniques to apply to the problems of reading.

The literature of the field is unanimous in deploring the serious lack of reading materials suitable for adult basic education classes. While a number of annotated bibliographies exist which list literally hundreds of items deemed as suitable for adults, upon examination the bulk of these turn out to be barely satisfactory. Most of these materials are, in any case, suitable only for intermediate and upper reading levels (grade 3-8).

Increasingly, however, the commercial publishers are addressing themselves to filling this vacuum and it is likely that the next few years will witness a substantial gain in the production of suitable materials. Quite apart from this prospect, however, the consensus of opinion is that some of the most useful material can come from the efforts of classroom teachers themselves. By relying upon their knowledge of the student and his needs they can collect many types of printed material in daily use and can contribute to the solution of this problem. 1/

It must also be pointed out that, once a student begins to read and finds himself making progress, he will read anything from an elementary school basal reader to a label on a can, in his passion to read more and more.

The question of prerequisites and training of literacy teachers has been answered variously by the authorities. Ongoing literacy campaigns draw from a variety of available talent, from the untrained housewife to the retired teacher. Few authorities believe in the necessity of having conventionally trained professional teachers for these classrooms, largely because of the successes made by the professionally untrained but socially committed volunteer. The Works Progress Administration's experience in literacy training supports this finding. Yet all authorities agree on the need for preservice and inservice training fitted to the problems encountered in the adult classroom. They also disapprove of the employment of professionals who teach a full day in elementary or secondary schools and then teach night courses in adult basic education. Teachers of adult illiterates may not need to present any credentials beyond their own literacy, intelligence, commitment, and warmth, but they must function at maximum efficiency and generate enthusiasm. The overworked day school professional cannot, usually, manage to be fresh and stimulating in night classes as well.

There is general agreement by current authorities that to enthusiasm and commitment must be added a training program that touches on the follow-

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1/ A model article on primer construction from which all literacy training teachers could benefit, appears in the UNESCO publication, Fundamental Education (bibliographical citation #10).

ing dimensions of the teaching-learning process:

1. The psychological and sociological factors in literacy training;
2. Principles of learning;
3. Group dynamics and human relations;
4. The identification of the needs and goals of the individual student;
5. Testing and test evaluation;
6. Development of supplemental materials. [2]

With regard to tests and measurements in this field, Raymond Cattell has well summarized the obstacles which have prevented the development of adequate instruments. He lists the following five:

Technical Obstacles to be Overcome in Adult Test Design

1. The greater need for freeing adult tests from assumptions of uniform knowledge, education and skills. This arises from greater variability among adults in their remoteness from schooling and from specialization of interests owing to occupational concentration.
2. The comparative difficulty of achieving a test standardization based on really adequate sampling and the consequent uncertainty regarding the true mean and standard deviation of adult scores.
3. The unsolved problem of devising a means of expressing scores in comparable and meaningful units, usable for all purposes. In this is involved the problem of fixing the denominator of chronological age to be employed in calculating adult intelligence quotients.

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[2] The single best plan for a preservice program is outlined in Robert F. Barnes, "A Review and Appraisal of Adult Literacy Materials and Programs," Report on Research Project G - 029 (unpublished report to the United States Office of Education, October 1965).

4. The difficulty created by the age decline of test scores on speeded (time) intelligence tests among adults. This leads to new problems of standardization and raises questions about the nature of intelligence.

5. The lack of success which has met all efforts to discover intelligence subtests having a validity and predictive value for adults as high as those obtained for the subtest varieties used with children.

BIBLIOGRAPHY

Books

1. Cass, Angelica W. Adult Elementary Education, New York: Noble and Noble, 1956.

2. Fryer, D.H. and Henry, Edwin R. (ed.). "Care and Treatment of Language Deficiencies." Handbook of Applied Psychology, New York: Rinhart, 1950.

3. Ginzberg, Eli and Bray , Douglas W. The Uneducated, New York: Columbia University Press, 1953.

4. Goldberg, Samuel. Army Training of Illiterates in World War II, New York: Bureau of Publications, Teachers College, Columbia University, 1951.

5. Gudschinsky, Sarah C. Handbook on Literacy, Glendale, California: The Summer Institute of Linguistics, 1953.

Monographs, Reports, Articles, Bulletins and Mimeographed Materials

1. Adult Literacy Education in the United States, Office of Education Circular No. 324, Washington, D.C.: Government Printing Office, 1950.

2. Brooks, Deton, Jr. The Blackboard Curtain: A Study to Determine the Literacy Level of Able-Bodied Persons Receiving Public Assistance in Chicago. Chicago, Illinois: Science Research Associates, Inc., 1963.

3. ―――――――――. First They Must Read: A Study to Determine the Literacy Level of Able-Bodied Persons Receiving Public Assistance in East St. Louis, Illinois. East St. Louis, Illinois: St. Clair, Illinois County Department of Public Aid, June 1964.

4. Caliver, Ambrose. Literacy Education: National Statistics and Other Related Data, United States Office of Education Circular No. 376, Washington, D.C.: Government Printing Office, 1953.

5. Campbell, Doaks; Bair, F. and Harvey, O. *Educational Activities of the Works Progress Administration*, Washington, D.C.: Government Printing Office, 1939.

6. Cattell, Raymond B. "The Measurement of Adult Intelligence," *Psychological Bulletin*, 40: March, 1943, 153-193.

7. Cortright, R.W. "Professional Preparation in Literacy Education," *Journal of Teacher Education*, Vol. 16 (1965) 290-93.

8. ——————. "Profile of a Literacy Teacher," *Adult Education*, Vol. XV, No. 3 (1965) 167-69.

9. Crohn, Burrill, L. "The Diebold Literacy Project: Programming for the Illiterate Adult." *Programmed Instruction*, Vol. 6ss; June 1964.

10. D'Amico, Louis A.; Fattu, Nicholas, A. and Standlee, Lloyd S. *An Annotated Bibliography of Adult Literacy Training Materials*, Bulletin of Educational Research, Indiana University, 1954.

11. Gray, Williams. "The Teaching of Reading and Writing," *Monographs on Fundamental Education X*, Paris, UNESCO, 1956.

12. ——————. "The Definition and Measurement of Literacy," *Fundamental and Adult Education*, Vol. 9, 10, (1957-1958) No. 3.

13. Greenleigh Associates, Inc. *Educational Rehabilitation: An Evaluation of the Adult Basic Education Program of the State of Illinois*. New York, 1965.

14. Gregory, Francis A, Assistant Director, Office of Manpower, Automation and Training, Washington, D.C., "The Uneducated and Undereducated Workers: Manpower Problems for the U.S. " in *Report of the Conference of 100, Adult Basic Education Section, Adult Education Association of the U.S.A.* (Mimeographed), May 9-10, 1963.

15. Gudschinsky, Sarah C. "Recent Trends in Primer Construction," *Fundamental Education and Adult Education*, Vol. XI, No. 2, Paris, UNESCO, 1959.

16. Haggstrom, Warren C. "Poverty and Adult Education," *Adult Education*, Vol. 15, No. 3 (1965) 145-60.

17. Havighurst, Robert J. and Orr, Betty. *Adult Education and Adult Needs: A report*, Chicago: Center for the Study of Liberal Education for Adults, 1956.

18. Kuhlen, Raymond S. (ed.). "Psychological Backgrounds of Adult Education," *(Papers presented at a Syracuse University Conference)*, Chicago: Center for the Study of Liberal Education for Adults, 1963.

19. *Language Programs for the Disadvantaged Aged: Report of the NCTE Task Force on Teaching English to the Disadvantaged*, Champaign, Illinois: 1965.

20. Laubach, Robert S. *A Bibliography - World Literacy*, Syracuse: University Press, 1959.

21. Mitzel, M. Adele. "The Functional Reading Word List for Adults," *Adult Education*, XVI (1966), 67-69.

22. Moore, Clarence D. and Hendrickson, Andre. *Annotated Bibliography of Materials for Teachers of Americanization and Literacy Classes*, Columbus, Ohio: Ohio State University, 1958.

23. Murra, Kathrine O. *Sources of Information for Fundamental Education with Special Reference to Education for Literacy*, prepared by the Library of Congress for the Library Section of UNESCO, Washington, D.C.: Library of Congress, 1948 (Mimeo, not generally available), p. 123.

24. Pantell, Dora F. "Basic Adult Education: A Study." *Wilson Library Bulletin* (September 1965), pp. 71-74, 84.

25. Smith, Edwin H. and Smith, Marie. *Teaching Reading to Adults*, Washington, D.C.: National Association of Public School Adult Educators, 1962.

26. UNESCO. *Inter-American Seminar on Illiteracy and Adult Education: Summary Reports*. Paris Education Clearing House, 1950.

27. ———. *Literacy Teaching: A Selected Bibliography*. Paris: UNESCO, 1956.

28. U.S. Department of Health, Education and Welfare. *Literacy and Basic Elementary Education*, Washington, D.C.: Government Printing Office, 1961.

29. U. S. Department of Health, Education and Welfare, Office of Education. Educationally Deficient Adults, Their Education and Training Needs, (A Study for the Manpower Development and Training Program) Washington, D.C.: Government Printing Office, 1965.

30. ——————. Report on the Task Force on Adult Basic Education, Instructional Materials and Related Media, January 1964.

31. U. S. Department of Labor, Bureau of Labor Statistics. Education Attainment of Workers, March 1962, Washington, D.C.: Government Printing Office, May 1963.

32. Witty, P.A. "Guiding Principles in Reading Instruction, Teaching the Functionally Illiterate during World War II," Education, Vol. 85 (April 1965), 474-480.

33. ——————. "Psychometrics in Special Training Units of the Army," Education (May 1943), 534-537.

34. "War on Poverty; Book Publishing's Role in Adult Education, Job Training," Report on Conference Sponsored by the U.S. Department of Health, Education and Welfare, Office of Education and American Text Book Publishers Institute, Publishers Weekly, 185 (February 17, 1964), 38-50.

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